

TO MAY MASTER DÉNES JÁNOSSY  
ON HIS 70th BIRTHDAY

## The Comparative Osteomorphological Study of the European Small-statured Falcons (Aves: Falconidae)

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**ABSTRACT:** [The comparative osteomorphological study of European small-statured Falcons (Aves: Falconidae).] The author have completed the comparative osteomorphological study of smaller European Falcons, namely the Hobby (*Falco subbuteo* L., 1758), Merlin (*Falco columbarius* L., 1758), Eleonora's Falcon (*Falco eleonora* Gén , 1839), Kestrel (*Falco tinnunculus* L., 1758), Red-footed Falcon (*Falco vespertinus* L., 1766) and the Lesser Kestrel (*Falco naumanni* Fleisch., 1818) on the basis of 187 complete or partial skeletons. This study deals with all the important bones except the ribs and the backbones, even the digits are included. From every bone 3 to 10 measurements were taken, and the minimum and maximum values, averages, variances, variant coefficients, sum of squares are given according to the sexes. From the data the ratios yielding the greatest difference are calculated, which are characteristic to the given species, and hence are useful in the identification of the species. The interspecific size and form differences are demonstrated with figures, scatter diagrams and drawings.

### INTRODUCTION (LITERATURE SURVEY)

The osteological work up of European Falcons is already partially completed. There is a scattered earlier appearance of data on this topic in the literature, then OTTO (1981) and SCHMIDT-BURGER (1982) studied the medium-sized Central European Accipitridae, while SOLTI (1980, 1981a, 1981b) studied the bigger European Falcons in detail. In this work I completed the osteomorphological comparison of the smaller European True Falcons and Kestrels, namely the Hobby (*Falco subbuteo* L., 1758), Merlin (*Falco columbarius* L., 1758), Eleonora's Falcon (*Falco eleonora* Gén , 1839), Kestrel (*Falco tinnunculus* L., 1758), Red-footed Falcon (*Falco vespertinus* L., 1766) and Lesser Kestrel (*Falco naumanni* Fleisch., 1818). This work – with the exception of vertebrae and costae – deals with all the important bones (including the phalanges). My aim was to demonstrate the interspecific osteological differences both in size and shape, and hence give a firmer basis for the identification of these species.

In the literature d'ALTON (1838) was the first to deal with the osteology of Falcons. From the smaller European Falcons he dealt with *F. subbuteo* and *F. tinnunculus* and he compared these species with species living on other continents. He found the Hobby very similar to the greater true Falcons, only it is a bit smaller. The Kestrel specimen that he examined was a very young not yet completely ossified animal. He did not give measurements, he gave detailed drawings about the cranium, and in the case of the Kestrel also about the sternum. SUSHKIN (1899) examined the cranium of *F. tinnunculus* at different developmental stages, and prepared very detailed exact drawings on them.

PYCRRAFT (1902) examined the Falconiformes to genus level, but gave not measurements. SUSHKIN (1905) deals with the birds of prey on the basis of systematics and developmental biology, and compares the different genera of the continents. He summarises the osteological characteristics of the genera and families very thoroughly. From among the species I deal with in this study he mainly studied *F. subbuteo* and *F. tinnunculus*, but he also mentions some osteological characteristic of *F. columbarius* and *F. vespertinus*. He already mentioned several

osteological characteristics of Falcons, such as the longitudinal rib of the palatal part of os premaxillare, the differences of the shape of the cranial part of sternum, the different forms of crista medialis hypotarsi of the tarsometatarsus, etc. These features are also demonstrated with drawings. The main measurements of several species, and among them those of the species examined by the author are also given. In the case of the limbs only the longitudinal measurements are given, which was based only on a single specimen of each species. These measurements are in accordance with the averages of my data. LAMBRECHT (1914) deals with the carpometacarpus. He gives the characteristic of the ordos, within the Falconiformes he describes among others the shape of the carpometacarpus of the *Falco* and *Cerchneis* genera. ENGELMANN (1928) publishes only photographs of sternums among others from Kestrel, Hobby and Lesser Kestrel that are interesting from the point of view of osteology. RICHARDSON (1972) gives the length of the femur of *F. tinnunculus* and *F. columbarius*. BÄHRMANN (1974) deals with the Kestrel from among the lesser Falcons. In the case of the sternum he measured a great number of individuals, and gives several measurements, in the case of the coracoideum and scapula he only measured the length of a few specimens. The measured big sample of sternums gives a smaller minimum and greater maximum values than my measurements, and hence yields higher percentage of standard deviation values.

### ACKNOWLEDGEMENTS

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### MATERIAL

The collection of the measured material took quite a long time as some of them must have been borrowed from foreign museums and research institutes. From Hungarian collections the following bones were received: Hungarian Natural History Museum (Budapest): 33 skeletons, Mátra Museum (Gyöngyös) 64 skeletons, From the private collection of Tibor Balázs (Hevesvezekény) 15 skeletons, from the Hungarian National Geological Institute (Budapest) 1 skeleton.

The rest of the material belongs to foreign institutes. The majority of foreign material, 32 skeletons arrived from the Swedish Natural History Museum (Stockholm). The Palaeoanatomical Institute of the Ludwig – Maximilian University (Munich) lent 19 skeletons. The Zoological Institute of the Polish Academy of Science (Krakow) lent 9 skeletons, the British Museum (London) lent 7 skeletons, the Zoological Institute of the Russian Academy of Science (St. Petersburg) lent 6 skeletons and the Natural History Museum (Wien) lent 1 skeleton.

The species composition of the measured material is given in the next table.

	F.subb.	F.col.	Feleon.	F.tinn.	F.vesp.	F.naum.	Sum
HNHM, Budapest	3	4	—	16	10	—	33
MM, Gyöngyös	3	2	—	35	24	—	64
Priv. coll., Hevesvezekény	—	—	—	12	3	—	15
HNGI, Budapest	—	—	—	1	—	—	1
SNHM, Stockholm	6	26	—	—	—	—	32
PI, Munich	10	3	2	—	—	4	19
ZI, Krakow	5	1	—	3	—	—	9
BM, London	—	4	1	—	—	2	7
ZI, St' Petersburg	2	4	—	—	—	—	6
NHM, Wien	—	—	—	—	—	1	1
Sum	29	44	3	67	37	7	187

From the 6 European smaller Falcons a total of 187 complete or partial skeletons were studied. It would have been desirable to carry out these investigations on a larger material, but it was impossible due to practical reasons. A larger material would possibly have altered the minimum and maximum values, but I believe that the averages would not have been altered considerably.

The following table shows the composition of the material according to the species and sex.

	♂	♀	?	Sum
F. subbuteo	14	12	3	29
F. columbarius	18	22	4	44
F. eleonora	1	—	2	3
F. tinnunculus	23	28	16	67
F. vespertinus	11	16	10	37
F. naumanni	4	2	1	7
Sum	71	80	36	187

The number of more important bones according to species and sex.

		F.subb.	F.col.	Feleon.	F.tinn.	F.vesp.	F.naum.
Cranium	♂	10	14	—	14	9	2
	♀	8	19	—	22	12	1
	?	—	4	1	12	6	—
Mandibula	♂	10	14	—	14	9	1
	♀	6	20	—	23	13	1
	?	—	3	—	12	5	—
Coracoideum	♂	14	15	1	21	11	3
	♀	11	20	—	27	13	2
	?	3	2	2	16	10	1
Scapula	♂	14	16	1	21	11	3
	♀	11	21	—	27	13	2
	?	3	2	1	16	9	1
Humerus	♂	12	16	—	17	10	3
	♀	8	21	—	25	15	—
	?	—	2	1	15	7	2

		F.subb.	F.col.	F.eleon.	F.tinn.	F.vesp.	F.naum.
Ulna	♂	11	16	–	17	10	2
	♀	7	21	–	25	14	1
	?	–	2	1	15	7	2
Carpometacarpus	♂	11	17	–	14	10	2
	♀	7	21	–	25	14	1
	?	–	2	–	14	7	1
Sternum	♂	14	15	1	22	11	3
	♀	10	21	–	23	13	2
	?	3	2	2	16	7	1
Pelvis	♂	14	16	1	20	11	2
	♀	11	20	–	28	12	2
	?	2	2	2	14	6	1
Femur	♂	13	16	1	21	11	3
	♀	11	21	–	26	14	2
	?	–	2	2	15	7	1
Tibiotarsus	♂	11	16	–	13	9	2
	♀	6	20	–	25	14	1
	?	–	2	1	14	8	1
Tarsometatarsus	♂	11	17	–	14	10	2
	♀	7	20	–	25	14	1
	?	–	2	–	13	7	1

The localities of the material is very varied. The Hobby skeletons originated from North and Central Europe. More than half of the Merlin skeletons belong to the Swedish Natural History Museum, and hence their localities are North European, and mostly Scandinavian. The rest is mainly Central European, but some specimens originate from Great Britain, Greece, and from the neighbourhood of St. Petersburg. The localities of the Eleonora's Falcons are unknown. The Kestrels with the exceptions of three Polish specimens, and the Red-footed Falcons totally originate from Hungary. The localities of the Lesser Kestrel specimens are Spain, Greece and Turkey.

## METHODS

This work begins with a general part, where I describe some osteomorphological characteristics of the *Falco* genus. The detailed results of my study are given in the following order:

**Descriptive part:** I discuss bone by bone the ratios of measurements of each species, and the use of ratio values, then I compare the morphological features. Finally I shortly characterise each species and describe the main characteristics.

**Graphs and diagrams.**

**Drawings.**

**Tables of measurements and the ratio values.**

The anatomical names follow the nomenclature of BAUMEL (1979). Where I couldn't find the name of the discussed anatomical part in this work I followed BALLMANN (1969), LANGER (1980), OTTO (1981) or SCHMIDT-BURGER (1982), these names are always

indicated with the descriptor. For certain anatomical parts, for which I could not find a name in the literature, I prepared my own nomenclature (Plate III).

For the indications of directions there are controversial names in the literature. I followed BAUMEL (1979) therefore the directions in the discussion of the bones of the wing refer to an open wing position, the leg is treated as it would hang (not in a backwards stretched) position.

In the graphs the edges of the columns show the minimum and maximum values, while the intermediate line shows the average value. The numerical values are to be understood in mm. The number beside the sexes indicates the number of exemplares.

In the scatter diagrams the legends of the species are given one by one, the index numbers beside the signs indicate the number of exemplares.

The bone measurements were taken using a calliper to the nearest 0.1 millimetres. From the measured data the following values were calculated:

**n** = the number of data

**Min** = minimum value

**Max** = maximum value

$\bar{x}$  = average (arithmetic mean)

$$S = \text{Standard deviation } S = \sqrt{\frac{1}{n-1} \left( \sum x^2 - \frac{(\sum x)^2}{n} \right)}$$

$$S\% = \text{Percentage of standard variation (coefficient of variation)} = \frac{100 \cdot S}{\bar{x}}$$

**S<sup>2</sup>** = Variance

From the measured data, showing the greatest differences, I have calculated ratios that are characteristic for certain species, and hence are appropriate for the identification of species. Sometimes I gave ratio values that can not be used for the separation of the discussed species, but can be useful for the identification of fossil material. In the case of certain bones I changed the names of certain measures as compared to my former works.

I carried out the measuring at the following points:

#### **Cranium** (Plate I, Figures 1-3)

**GL** = greatest length: measured between the apex premaxillaris and prominentia cerebellaris (Plate I, Figure 1).

**CL** = caput (head) length: measured between the tip of processus frontalis of os nasale and prominentia cerebellaris (Plate I, Figure 1).

**RL** = rostrum (beak) length: measured between the apex premaxillaris and the tip of processus frontalis of os nasale (Plate I, Figure 1).

**BL** = basal length: measured between the caudal edge of condylus occipitalis and the apex of os basisphenoidale (Plate I, Figure 2).

**GW** = greatest width: the maximal width of the cranium, measured between the processus postorbitales (Plate I, Figure 3).

**TW** = tympanical width: the width between the alae tympanicae (processus paraoccipitalis OTTO, 1981) (Plate I, Figure 3).

**FW** = the smallest width between the fossae temporales (Plate I, Figure 3).

**MW** = minimal width: the smallest width of the pars nasalis of os frontale, at the supraorbital part (Plate I, Figure 3).

- SW** = supraorbital width: the greatest distance measured between the processus supraorbitales of os prefrontale (lacrimale) (Plate I, Figure 3).
- GH** = greatest height: from the condylus occipitalis to the highest point of os frontale measured in the medial line (Plate I, Figure 1).

#### **Mandibula** (Plate I, Figures 4-5)

- GL** = greatest length: measured from the apex mandibulae to the processus retroarticularis (proc. mandibularis posterior LEBEDINSKY, 1920, LAMBRECHT, 1933) (Plate I, Figure 4).
- SL** = the length of symphysis mandibularis (Plate I, Figure 4).
- GW** = greatest width: the distance between the processus mandibulae laterales (Plate I, Figure 4).
- RH** = ramus height: the greatest height of ramus mandibulae at the angulus mandibulae (Plate I, Figure 5).

#### **Quadratum** (Plate I, Figures 6-7)

- GH** = greatest height: the distance between the end of processus oticus quadrati and the condylus medialis of the processus mandibularis quadrati (Plate I, Figure 6).
- GW** = greatest width: measured from the tip of the processus orbitalis quadrati to the lateral edge of processus quadratojugalis of processus mandibularis quadrati (Plate I, Figure 6).
- MW** = mandibular width: the greatest width of processus mandibularis quadrati, measured between the edges of condylus medialis and processus quadratojugalis (Plate I, Figure 7).
- CW** = condylar width: the width measured between the condylus lateralis and cond. caudalis of processus mandibularis quadrati (Plate I, Figure 7).
- OW** = otical width: the greatest width of processus oticus, measured between the condylus squamosus and condylus prooticus (Plate I, Figure 6).

#### **Coracoideum** (Plate I, Figure 8)

- GL** = greatest length: measured from the processus acrocoracoideus to the angulus lateralis of the sternal end of the bone.
- ML** = medial length: measured between the processus acrocoracoideus and the angulus medialis of the sternal end of the bone.
- CW** = the smallest width of corpus coracoidei.
- GW** = greatest (sternal) width: from the angulus medialis to the processus lateralis.
- AW** = articular width: the width of facies articularis sternalis between the angulus medialis and angulus lateralis.

#### **Scapula** (Plate I, Figures 9-10)

- GL** = greatest length: measured between the apex acromialis and the caudal end of the bone (Plate I, Figure 10).
- GW** = the greatest width of the cranial end of the bone: measured between the apex acromialis and the edge of the facies articularis humeralis (Plate I, Figure 10).
- CW** = the smallest width of corpus scapulae (Plate I, Figure 10).
- GH** = the greatest height of the cranial end of the bone (Plate I, Figure 9).

### **Humerus** (*Plate II, Figure 1*)

- GL** = greatest length: measured between the caput humeri and processus flexorius.  
**PW** = greatest proximal width: measured from the tuberculum dorsale to the crista bicipitalis (cr. tub. ventralis).  
**CT** = the distance between the crista pectoralis (cr. tub. dorsalis) and tuberculum ventrale.  
**CW** = the smallest width of corpus humeri.  
**DW** = greatest distal width: measured between the edges of condylus dorsalis and processus flexorius.

### **Radius** (*Plate II, Figures 2-4*)

- GL** = the greatest length (*Plate II, Figure 2*).  
**SP** = the smallest proximal diameter (cranio-caudal direction) (*Plate II, Figure 3*).  
**GP** = the greatest proximal diameter (dorso-ventral direction) (*Plate II, Figure 3*).  
**CW** = the smallest width of corpus radii (dorso-ventral direction near to the proximal end of the bone) (*Plate II, Figure 2*).  
**DW** = the greatest distal width (dorso-ventral direction) (*Plate II, Figure 2*).  
**DD** = the degree of deviation of the distal end of the bone: measured from the cranial contour of the corpus radii to the caudal edge of facies articularis radiocarpalis or to that of the tuberculum aponeurosis (*Plate II, Figure 4*).

### **Ulna** (*Plate II, Figures 5-7*)

- GL** = greatest length: measured between the apex of olecranon and condylus ventralis (*Plate II, Figure 6*).  
**PW** = greatest proximal width: the distance measured between the outer edges of cotyla ventralis and cotyla dorsalis (*Plate II, Figure 5*).  
**PH** = greatest proximal height: measured from the cranial edges of cotyla ventralis and cotyla dorsalis to the apex of olecranon (*Plate II, Figure 5*).  
**PT** = the transverse measure of the proximal end of the bone: from the line between the outer edges of cotyla dorsalis and olecranon to the outer edge of cotyla ventralis (*Plate II, Figure 5*).  
**CW** = the smallest width of corpus ulnae (measured in cranio-caudal direction) (*Plate II, Figure 6*).  
**DT** = the greatest, transverse measure of the distal end of the bone: measured between the labrum of the condylus dorsalis and the tuberculum carpale (*Plate II, Figure 7*).

### **Carpometacarpus** (*Plate II, Figure 8*)

- GL** = greatest length: measured between the proximal edge of trochlea carpalis and the facies articularis digitalis minor (tub. ulnare LAMBRECHT, 1914; fac. art. dig. III LAMBRECHT, 1933).  
**PW** = greatest proximal width: measured between the caudal edge of trochlea carpalis and the processus extensorius of os metacarpale alulare (not perpendicularly to the longitudinal axis).  
**CW** = the smallest width of the corpus of os metacarpale majus (metac. II): in cranio-caudal direction, near the distal end of the bone.

- DT** = the greatest, transverse diameter of the distal end of the bone: measured between the cranial edge of facies articularis digitalis major (dig. II) and the caudal edge of facies articularis minor (dig. III).
- SL** = the length of synostosis metacarpalis distalis.

### *The digits of the wing (ossa digitorum manus)*

#### **Phalanx digiti alulae (phalanx 1 digiti 1 anterior)**

*(Plate II, Figures 9-10)*

- GL** = the greatest length of the phalanx (Plate II, Figure 9).
- PW** = the greatest proximal width (cranio-caudal direction) (Plate II, Figure 9).
- PH** = the greatest proximal height (dorso-ventral direction) (Plate II, Figure 10).

#### **Phalanx proximalis digiti majoris (phalanx 1 digiti 2 anterior)**

*(Plate II, Figures 11-13)*

- GL** = the greatest length of the phalanx (Plate II, Figure 11).
- PW** = the greatest proximal width (cranio-caudal direction) (Plate II, Figure 13).
- PH** = the greatest proximal height (Plate II, Figure 12).
- GW** = the greatest width of the phalanx: measured near the distal end of the bone (Plate II, Figure 11).
- DH** = the greatest distal height (Plate II, Figure 12).

#### **Phalanx distalis digiti majoris (phalanx 2 digiti 2 anterior)**

*(Plate II, Figures 14-15)*

- GL** = the greatest length of the phalanx (Plate II, Figure 14).
- PW** = the greatest proximal width (Plate II, Figure 14).
- PH** = the greatest proximal height (Plate II, Figure 15).

#### **Phalanx digiti minoris (phalanx 1 digiti 3 anterior)**

*(Plate II, Figures 16-17)*

- GL** = the greatest length of the phalanx (Plate II, Figure 16).
- PW** = the greatest proximal width (Plate II, Figure 16).
- GW** = the greatest width of the phalanx (Plate II, Figure 16).
- GH** = the greatest height of the phalanx (Plate II, Figure 17).

#### **Sternum (Plate I, Figures 11-12)**

- GL** = greatest length: measured from the apex of spina externa to the caudal edge of trabecula mediana (Plate I, Figure 11).
- CL** = length of carina sterni: measured between the apex carinae and the caudal edge of trabecula mediana (Plate I, Figure 11).
- CH** = height of carina sterni: measured from the line between the spina interna and caudal edge of trabecula mediana to the highest point of carina sterni (not to the apex carinae) (Plate I, Figure 11).
- CW** = cranial width: the distance between the processus craniolaterales (Plate I, Figure 12).



**MW** = medial width: the distance between the last processus costales being in caudal position of both sides (Plate I, Figure 12).

### **Pelvis (os coxae, synsacrum) (Plate I, Figures 13-14)**

**ML** = medial length: the length of the synsacrum, measured from the cranial tips of the top of crista dorsalis to the caudal edge of synsacrum (facies articularis caudalis) (Plate I, Figure 14).

**MW** = the minimal width of the pelvis measured at the preacetabular part of the ilia (Plate I, Figure 14).

**AW** = the width measured at the antitrochanteres (Plate I, Figure 14).

**AA** = the smallest distance between the edges of the acetabula (Plate I, Figure 14).

**GW** = greatest width: measured at the processus terminalis ischii (Plate I, Figure 14).

**AD** = the diameter of foramen acetabuli: measured in the cranio-caudal direction (Plate I, Figure 13).

### **Pygostylus (Plate I, Figures 15-16)**

**GL** = greatest length (Plate I, Figure 16).

**DL** = the length of margo dorsalis (Plate I, Figure 16).

**GW** = greatest width: measured at the basis pygostyli (Plate I, Figure 15).

**GH** = the greatest height of lamina pygostyli (Plate I, Figure 16).

### **Femur (Plate II, Figures 18-20)**

**GL** = greatest length: from the proximal edge of crista trochanteris to the condylus lateralis (Plate II, Figure 20).

**ML** = medial length: measured from the caput femoris to the condylus medialis (Plate II, Figure 20).

**PW** = proximal width: measured from the caput femoris to the lateral edge of the trochanter femoris (Plate II, Figure 20).

**PH** = proximal height: the distance from the line between the caudal edges of caput femoris and trochanter femoris to the cranial edge of crista trochanteris (Plate II, Figure 18).

**CD** = the diameter of caput femoris: measured in cranio-caudal direction (Plate II, Figure 18).

**CW** = the smallest width of corpus femoris (Plate II, Figure 20).

**DW** = distal width: from the medial surface of condylus medialis to the lateral edge of trochlea fibularis (Plate II, Figure 20).

**DH** = distal height: the height of condylus medialis in cranio-caudal direction (Plate II, Figure 19).

### **Tibiotarsus (Plate II, Figures 21-23)**

**GL** = greatest length: measured in the direction of the longitudinal axis from the medial edge of the proximal end of the bone (crista interna BALLMANN, 1966) to the distal edge of trochlea cartilaginis tibialis (mostly the condylus lateralis) (Plate II, Figure 22).

**PT** = the greatest, transverse measure of the proximal end of the bone: measured in the direction of facies articularis medialis and crista cnemialis lateralis (Plate II, Figure 21).

**CW** = the smallest width of corpus tibiotarsi: measured in medio-lateral direction on the section between the crista fibularis and the connection of the fibula (Plate II, Figure 22).

- CT** = the smallest thickness of corpus tibiotarsi (cranio-caudal direction) (Plate II, Figure 23).  
**DW** = distal width: measured on the cranial side between the edges of condylus medialis and cond. lateralis (Plate II, Figure 22).  
**DH** = distal height: the cranio-caudal measure of condylus medialis (or possibly cond. lateralis if it is larger) (Plate II, Figure 23).

#### **Tarsometatarsus** (*Plate II, Figures 24-27*)

- GL** = greatest length: measured between the eminentia intercondylaris and the distal edge of trochlea metatarsi III (Plate II, Figure 24).  
**PW** = proximal width: measured between the lateral edges of cotyla medialis and cotyla lateralis, including the crista lateralis hypotarsi (Plate II, Figure 24).  
**HH** = the greatest height of hypotarsus: measured from the highest point of crista medialis hypotarsi (plantar direction) perpendicular to the dorsal edge of tarsometatarsus (Plate II, Figure 26).  
**FD** = the depth of fossa infracotylaris dorsalis: measured from the dorsal edges of tarsometatarsus in the line of foramina vascularia proximalia (Plate II, Figure 27).  
**CW** = the smallest width of corpus tarsometatarsi (medio-lateral direction) (Plate II, Figure 24).  
**DW** = distal width: measured between the edges of trochlea metatarsi II and trochlea metatarsi IV (Plate II, Figure 24).  
**DT** = the transverse measure of the distal end of the bone: measured from the line connecting the dorso-lateral edges of trochlea metatarsi III and trochlea metatarsi IV to the apex of trochlea metatarsi II (Plate II, Figure 25).

### ***The digits of the foot (ossa digitorum pedis)***

#### **Phalanges proximales et intermediae** (*Plate II, Figures 28*)

- GL** = the greatest length of the phalanx (including tuberculum extensorium).  
**PW** = proximal width: measured between the tuberculum collaterale mediale and tuberculum collaterale laterale.  
**CW** = the smallest width of corpus phalangis.  
**DW** = distal width: the width of capitulum phalangis.

#### **Phalanges distales (ungulares)** (*Plate II, Figures 29-30*)

- GL** = the greatest length of the talon: measured between the tuberculum extensorium and apex phalangis (Plate II, Figure 30).  
**PW** = proximal width (Plate II, Figure 29).  
**PH** = proximal height: measured between the tuberculum extensorium and tub. flexorium major (Plate II, Figure 30).

## GENERAL PART

The examined species are very similar morphologically to each-other. In many cases it is very difficult or even impossible to find distinguishing markers, the existing markers are very weak, they are not exclusively valid for the given species, and they can be only statistically evaluated. The size differences between the species are small, in most of the cases the measurements of the females of the smaller species are overlapping or equal with the measurements of the males of the larger species. Therefore in the process of identification the measurements and the morphological characters must be evaluated together. The size rank of these species according to the body mass from the literature (PÁTKAI, 1958, WEICK, 1980) is the following:

**F. eleonorae** > **F. subbuteo** = **F. tinnunculus** > **F. columbarius** > **F. vespertinus** = **F. naumanni**

The species can be divided into two groups from several point of view. The sternum of the Eleonora's Falcon, Hobby and Merlin are longer, these species form the group called "true Falcons", their humerus and the bones of the shoulder are also stronger than in the Kestrels. In the true Falcons sexual dimorphism is also more pronounced than in the Kestrels, where the dimorphism is negligible. Usually in average the females of the Kestrels are a bit larger than the males, but it is not always true for every individuals.

The *Falco* genus – as opposed to other European genera of birds of prey – can be characterised by the following features in general:

**Cranium:** the cranium is relatively short, especially at the orbital part, the neurocranium is more or less rounded. The beak (rostrum) is thick and short, on the crista tomialis at the os premaxillare there is a protrusion, it is the so-called "Falcon tooth". On the palatal part of the os premaxillare there is a longitudinal rib set out from the tip of the beak. The nostril (apertura nasi externa) is rounded, in the middle there is a bony part. The os prefrontale (lacrimale) in the true Falcons, and on older specimens of the Kestrels becomes fused by a bony tissue to the cranium at the facies articularis frontonasalis. The processus supraorbitalis is long, relatively narrow, its distal part (supraorbitale, PYCRAFT, 1902) does not separate.

**Mandibula:** the ramus mandibulae at the symphyseal part is curved downward very strongly, on the palatal edge (corresponding to the Falcon tooth) there is an incision. The fenestra mandibulae rostralis and the fen. mand. caudalis are both present, although the latter is very small. The tip of the processus mandibulae lateralis is strongly curved into caudal direction (lateral view), and hence stronger connected to the quadratum than in another birds of prey. The processus retroarticularis is very small, or completely missing. The dorso-medial edge of fossa caudalis is strongly protruding (later I will refer to this point as prominentia caudalis). This anatomical marker is missing in other birds of prey, only in the case of owls can we find a similar part.

**Clavicula (furcula):** the size of processus acromialis (tuberculum scapulare, LAMBRECHT, 1933) is equal with the size of processus acroracoideus (tuberculum coracoideale, LAMBRECHT, 1933). In the European members of the Accipitridae and Pandionidae families the processus acromialis is hardly visible or completely missing.

**Coracoideum:** the processus procoracoideus (proc. scapularis, OTTO, 1981) is large and long, the processus lateralis is usually missing at the sternal end of the bone, or very small in size.

**Scapula:** the lateral part of the acromion is considerably smaller, while the medial (costal) part is considerably larger than in the members of the Accipitridae and Pandionidae families.

**Humerus:** the crista pectoralis is large, only the *Accipiter*, *Pernis* and *Pandion* species have similarly sized or larger cristas. In the members of the Accipitridae and Pandionidae

families on the ventral side of the proximal end of the bone, distal from the crista bicipitalis, there is a foramen nutricium (BALLMANN, 1969). This is missing in the species of the *Falco* genus, but on the ventral (or ventro-cranial) side of corpus humeri there is a similar foramen, which is usually missing in the above mentioned species (*Pernis*, *Buteo*).

**Radius:** the tuberculum aponeurosis is bigger on the cranial side than in other birds of prey, and at the caudal side of the distal end of the bone, at the middle of the facies artic. radiocarpalis there is a very small protrusion. In other birds of prey there is a well-distinguished tuberculum at this position (later tuberculum ulnare).

**Ulna:** at the distal bone end the tuberculum carpale is quite large, the condylus ventralis is larger, while the condylus dorsalis is smaller than in other birds of prey. In the latter opposed to the Falcons on the ventral side the labrum condyli is connected with an arch to the corpus.

**Carpometacarpus:** in the Falcons at the ventral edge of the proximal end of os metacarpale minus (metac. III) there is a pointed protrusion. In other birds of prey this protrusion is either smaller or missing, but in this case next to this place distally there is another, similar protrusion.

**Sternum:** the carina sterni is high, the arch of margo ventralis is relatively less rounded, low, especially so on the caudal section. The spina interna is present and visible, which is missing in the species of the Accipitridae and Pandionidae families. The foramen pneumaticum is big, we can find similar sized foramina in the *Circus* and *Accipiter* species. The planum postcraniale is either very small or completely missing.

**Pelvis:** the pelvis (os coxae and synsacrum) is relatively wide, rounded inside. The synsacrum hardly bending along its longitudinal axis, the top of crista dorsalis is straight or rounded in medio-lateral direction. The cristae iliacae dorsales do not protrude in a rib-like form as in the *Accipiter*, *Pernis*, *Buteo*, and *Circus* species. On the preacetabular part (ala preacetabularis ilii) the pelvis narrows down to a lesser degree than in the formerly mentioned species. The antitrochanter is big. The tuberculum preacetabulare is small and pointed, it is wider in the *Pandion*, while in other birds of prey it is missing.

**Femur:** the facies articularis antitrochanterica in cranial view a bit arched, convex, this part is either straight or concave in the Accipitridae and Pandionidae species. The fovea ligamenti capitis is very shallow. The crista trochanteris on the cranial side does not connect to the corpus femoris all along, the foramen pneumaticum (SCHMIDT-BURGER, 1982) is located very near to the proximal end of the bone, and situated in line with the caput femoris. In the Accipitridae species this is found distally lower, and missing in the *Pandion*. On the distal end of the bone the epicondylus lateralis is very small or missing (similarly to the *Pernis* and *Pandion* species).

**Tibiotarsus:** the processus cnemialis (SCHMIDT-BURGER, 1982) is missing, does not protrude in proximal direction. The crista patellaris is strongly arched. Both the facies gastrocnemialis and the sulcus intercrystalis is shallower and less rounded than in the *Accipiter* and *Buteo* species. The canalis extensorius located on the cranial side of distal end of the bone is bridged over by two pons supratendineus. In other non-Falconid birds of prey the pons supratendineus is located in medial direction from the longitudinal axis. In Falcons the epicondylus lateralis on the distal end of the bone is well developed and big, but the epicondylus medialis is almost not visible. As for the Accipitridae the opposite is true, the epicondylus lateralis is missing and the epicondylus medialis is big.

**Tarsometatarsus:** the crista plantaris mediana runs along all the length of the corpus until the distal end. Hence on the plantar side the sulcus flexorius, which is a deep, longitudinal canal in other birds of prey, is divided in the Falcons. The crista medialis hypotarsi is

placed more to the centre in the direction of the longitudinal axis of the tarsometarsus.

The crista lateralis hypotarsi is located on the lateral edge of the plantar side, and bends outwards into lateral direction. The tuberositas musculi fibularis brevis can not be found, and hence the fossa parahypotarsalis lateralis is not formed.

At the proximal end of the bone the fossa infracotyleris dorsalis is wide and long, the foramina vascularia proximalia are standing well apart, and are placed in one line. The tuberositas musculi tibialis cranialis in dorsal view are lying in medial direction from the longitudinal axis, while in the members of the Accipitridae family these are located in the line of the longitudinal axis, or placed in lateral position from it. In other birds of prey near to the distal end of the bone on the dorsal side there is a considerably big foramen, namely the foramen vasculare distale. In the Falcons there are two very small foramina that open on the plantar side at the same point.

The trochlea metatarsi IV in proximal direction is located more to the back (the os metatarsale IV is shorter) and the trochlea metatarsi III in distal direction is located more to the front than in the Accipitridae and Pandionidae species. As a consequence in the Falcons the trochleae in dorsal view are located along an arch, in other birds of prey along a straight line. From distal view the trochleae are placed along a more arched line than in the Accipitridae species.

## DESCRIPTIVE PART

### Cranium

Regarding their size the skull of the Eleonora's Falcon is the biggest, the second is the Hobby's and the Kestrel's and that of the Merlin is a little bit smaller. The cranium of the Red-footed Falcon and the Lesser Kestrel is considerably smaller, their longitudinal measurements do not overlap with that of the former species (Plate IV, Figure 2). On the basis of their size they can be easily separated from the former species. In the case of the Eleonora's Falcon I had only an individual of unknown sex, where **GL**=51.4 mm, **GW**=30.3 mm. The **GL/GW** value is 1.70.

The rank of the species according to the length of the cranium measured without the beak (**CL**) is the following:

**F. tinnunculus** > **F. subbuteo** > **F. columbarius** > **F. vespertinus** > **F. naumanni**

There is a considerable difference between the sexes in the case of the Hobby and Merlin. The females are considerably larger, in the case of the Hobby the longitudinal measurements of the sexes do not overlap at all, in the Merlin they overlap only to a small extent. In the case of the Kestrels there is only a slight difference in size, the females are a bit larger (Plate IV, Figure 2).

Regarding its relative size the beak of the Hobby is larger and more robust, and measured at the nostrils wider than that of the other species. The nostrils themselves are located more apart than in the Merlin and Kestrel. Among the cranium of the Hobby and Merlin the beak size is the most reliable differentiating marker. Relatively both the Red-footed Falcon and the Lesser Kestrel have larger beaks as compared to the Merlin or the Kestrel (**CL/RL** values are low).

The neurocranium of the Kestrel is the biggest among the examined species (from the Eleonora's Falcon I did not have adequate material). In the case of the true Falcons the size of the beak relative to the body size is larger in the females than in the males (Plate IV, Figure 2).

The cranium relative to its width is higher in the Merlin than in the Hobby. The Kestrel and the Red-footed Falcon are in intermediate position between the former species. The cranium

of the Lesser Kestrel is relatively high, but the **GW/GH** values are within the range of the measurements of the Merlin, Kestrel and Red-footed Falcon (Plate V, Figure 1).

The shape of the neurocranium, and especially its contour in lateral view is different in the examined species. In the Merlin the frontal part of os frontale is more protruding, but the nasal part is more concave, and hence the orbital part of the cranium is more flattened than in the Hobby. Consequently the cranium in lateral view is more elongated. In the Red-footed Falcon the frontal part of os frontale is less protruding than in the former two species, and in the Kestrel even less protruding. A similar phenomenon is found in the prominentia cerebellaris, which protrudes more (in caudal direction) in the Hobby and Merlin than in the Kestrel and the Red-footed Falcon. As a consequence of all these features the neurocranium of the Merlin is more cornered than that of the Hobby (Plate XXXIV, Figures 1-2). The neurocranium of the Kestrels is more rounded, especially that of the Kestrel's (Plate XXXIV, Figures 3-5).

The ratio of the largest width of the cranium (**GW**) and the width of os squamosum measured at the alae tympanicae is different in the Falcon species. In the Hobby the former is always bigger than the latter, but in the other species the two measurements are usually equal, but in several cases the **TW** value is greater (see the **GW/TW** values).

The processus supraorbitalis of os prefrontale (lacrimale) is wider in the Merlin than in the Hobby, it narrows down only near the apex. The arching of the two processus supraorbitales on the two sides is the widest in this species (Plate XXXIV, Figure 7).

In the Hobby this bone is narrower, narrows down towards the apex gradually, and the arch of the bones in dorsal view is smaller (Plate XXXIV, Figure 6). In the Kestrel and the Red-footed Falcon the processus supraorbitalis is narrow, similar to the Hobby, but less arched. In lateral view in the Hobby the processus supraorbitalis is arching higher, than in the Merlin (Plate XXXIV, Figures 1-2). In the Lesser Kestrel the processus supraorbitalis is short and wide.

In the Hobby and Merlin the os prefrontale at the facies articularis frontonasalis is ossified to the cranium in most of the cases. In the Kestrels it happens very seldom, probably only in old specimens.

It is not an absolutely reliable but usually quite good distinguishing feature that the caudo-lateral edge of the os palatinum in the Merlin and Red-footed Falcon is more pointed and angled than in the Hobby, Kestrel and Lesser Kestrel, where this edge is more rounded and arched (Plate XXXV, Figures 3-4). In the Hobby the plate of the os palatinum is longer, and consequently the processus premaxillaris is shorter than in the other species.

One of the best identifying key between the species is the longitudinal rib on the palatal part of os premaxillare, starting from the tip of the beak. This more pronounced in the Red-footed Falcon, where there is a protrusion (tip) at the middle of this rib. In the Hobby and Lesser Kestrel this rib is well developed, but the tip at the middle is missing. The rib is either straight or moderately rounded. In the Kestrel the rib is smaller, but still very visible, in lateral view its shape is a bit concave. This rib is smallest in the Merlin, that sometimes can not be seen at all (Plate XXXIV, Figures 1-5).

The narrowest measure of the cranium (**MW**) – which is found at the pars nasalis of os frontale – is different in the species, compared to the greatest length of the cranium (**GL**) the rank of the species is the following:

**F. subbuteo > F. vespertinus > F. tinnunculus > F. columbarius**

Above the eyes the cranium is the widest in the Hobby, and the narrowest in the Merlin. We get the same rank if we compare the **MW** value to the width of the cranium (**GW/MW**).

The fossa temporalis is bigger in the Red-footed Falcon than in the other species (**TW/FW** value is the highest) (Plate XXXV, Figures 1-2).

## Summary

### ***Falco subbuteo:***

- the size of the beak is big, robust,
- the neurocranium is comparatively low, its contour in lateral view is arched,
- the palatal rib of os premaxillare is well-developed, but has not got an apex,
- the greatest width of the cranium (**GW**) is always greater than the width measured at the alae tympanicae,
- the os prefrontale is ossified to the cranium, the proc. supraorbitalis is relatively narrow.

### ***Falco columbarius:***

- the beak is relatively small,
- the contour of the neurocranium is angled in lateral view, the cranium is high,
- the orbital part of the cranium is relatively low (lateral view),
- the palatal rib of os premaxillare is badly developed,
- the caudo-lateral edge of os palatinum is angled, pointed,
- the arch of the processus supraorbitales at the sides is wide, and the processus supraorbitalis itself is wide,
- the os prefrontale is ossified to the cranium.

### ***Falco tinnunculus:***

- the beak is relatively small,
- the neurocranium is big, relatively rounded,
- the caudo-lateral edge of os palatinum is rounded.

### ***Falco vespertinus:***

- the neurocranium is relatively small, the beak is big,
- the palatal rib of os premaxillare is well-developed, and has got an apex at the middle,
- the caudo-lateral edge of os palatinum is angled, that is pointed,
- the fossa temporalis is large.

### ***Falco naumanni:***

- the cranium is small,
- the palatal rib of os premaxillare is well-developed, and has not got an apex at the middle,
- the processus supraorbitalis short and wide.

## **Mandibula**

In the length of ramus mandibulae there is no such a great difference among the species as in the case of the cranium. The length of the ramus of the Kestrel is completely overlaps with that of the Hobby, and even the size of the Red-footed Falcon females overlap with that of the Hobby males. The Red-footed Falcon totally overlaps with the size range of the Merlin, and even the Lesser Kestrel is reaching this range (Plate VI, Figure 1). This phenomenon might be explained by the fact that the cerebellar part is more elevated on the cranium of the Hobby and Merlin, and hence the longitudinal size of the cranium increases, and its ratio to the mandibula changes.

In the Hobby and Merlin the sexes almost completely separate by the length (Plate VI, Figure 1).

The spread of the rami mandibulae is strongest in the Kestrel, which has got the widest neurocranium, and weakest in the Hobby and Merlin (Plate VI, Figure 2). But the stretching might be considerable different even within a species. The height of ramus mandibulae (**RH**)

compared to its length is greatest in the Red-footed Falcon, and smallest in the Merlin. In this respect the order of the species is the following:

**F. vespertinus = F. naumanni > F. subbuteo = F. tinnunculus > F. columbarius**

The downward curving of the symphyseal part (lateral view) is strongest in the Merlin, is more curved, and the curving is most flattened in the Hobby (Plate XXXV, Figures 15-17).

The fenestra mandibulae rostralis and the fen. mand. caudalis are both present in all of the species, very occasionally closed in some Hobby and Merlin individuals. The fenestra mandibulae rostralis is the most opened and biggest in the Red-footed Falcon.

The surface of the pars caudalis of ramus mandibulae (os articulare) is largest in the Kestrel, and in the Hobby is relatively smaller than in the Merlin (dorsal view).

The shape of the caudal part is also different in the discussed species (Plate XXXV, Figures 18-21). The processus mandibulae medialis is longest in the Kestrel, but in the Red-footed Falcon curves downward stronger in dorsal direction (caudal view) than in the other species (Plate XXXV, Figures 5-6).

In the Falcons the processus retroarticularis is very small, or hardly detectable, but on the dorso-medial edge of fossa caudalis there is another, dorso-caudal protrusion (later referred to as prominentia caudalis). This protrusion is more pointed in the Merlin and Red-footed Falcon, and bigger in caudal direction than in the Hobby, Kestrel and Lesser Kestrel (Plate XXXV, Figures 18-21).

The processus retroarticularis is very small but visible in the Red-footed Falcon, and practically missing in the Kestrel.

### Summary

#### ***Falco subbuteo:***

- the ramus mandibulae at the symphyseal part is curved downward in a flattened arch (lateral view),
- the surface of the pars caudalis of ramus mandibulae is relatively the lowest (dorsal view),
- the tip of prominentia caudalis is small and rounded, blunt (dorsal view).

#### ***Falco columbarius:***

- the ramus mandibulae is the lowest,
- the ramus mandibulae at the symphyseal part is curved downward very strongly (lateral view),
- the prominentia caudalis is big and pointed (dorsal view).

#### ***Falco tinnunculus:***

- the spread of the rami mandibulae is strongest in this species,
- the pars caudalis of ramus mandibulae is relatively large (dorsal view),
- the processus mandibulae medialis is longest in this species,
- the prominentia caudalis is small and rounded, blunt (dorsal view),
- the processus retroarticularis is missing (lateral view).

#### ***Falco vespertinus:***

- the ramus mandibulae is relatively high,
- the fenestra mandibulae rostralis is most opened in this species,
- the prominentia caudalis is big and pointed (dorsal view),
- the processus retroarticularis is detectable (lateral view).

#### ***Falco naumanni:***

- the ramus mandibulae is high,
- the prominentia caudalis is small and rounded, blunt (dorsal view).



## Quadratum

The Kestrel has got the greatest while the Red-footed Falcon and Lesser Kestrel has got the smallest quadratum. The highest size of the Red-footed Falcon, the **GH**, does not practically overlaps with that of the Hobby and Kestrel, and overlaps with the Merlin only to a small extent. The quadratum of the latter three species can not be separated by their size. In the case of the Eleonora's Falcon I only have partial data on a male individual, where **MW** = 8.0 mm and **CW** = 3.0 mm.

The ratio of the width and the length of the quadratum is different in each species (Plate V, Figure 2). The **GH/GW** value is extremely low in the Red-footed Falcon (the processus orbitalis quadrati is long, and the proc. oticus quadrati is short), and hence the quadratum is most square in this species. The most elongated quadratum, and the highest value is found in the Hobby (proc. oticus quadrati is long) (Plate XXXV, Figures 7-10).

The processus orbitalis quadrati is narrower (dorso-ventral direction) in the Hobby and Red-footed Falcon than in the Merlin and Kestrel. In the Kestrel the processus orbitalis is very short and wide in dorso-ventral direction (Plate XXXV, Figures 7-10).

The condylus lateralis of processus mandibularis quadrati (at the cotyla quadratojugalis) is laterally slightly elongated in the Falcons (later referred to as processus quadratojugalis). This is longer in the Merlin than in the Hobby. The articular part of processus mandibularis is wider in the Hobby than in the Merlin, especially at the sulcus intercondylaris. The shape of both the articular surface and the processus quadratojugalis is different in each species (Plate XXXV, Figures 11-14). The processus mandibularis between the condylus lateralis and cond. caudalis is narrower in the Red-footed Falcon than in the rest of the species (sometimes narrower than the width measured at the cotyla quadratojugalis), and hence the **MW/CW** value is especially high. In the Lesser Kestrel the processus mandibularis at the cotyla quadratojugalis is also wider than at the condyli, or equals with it.

In the only male Eleonora's Falcon specimen measured the **MW/CW** value is 2.67.

In the Hobby, Merlin and Kestrel on the caudal edge of condylus caudalis of processus mandibularis quadrati there is a sharp crista, in the Red-footed Falcon this is missing.

The rib connecting the condylus squamosus and cond. proöticus at the processus oticus quadrati (incisura intercondylaris) in the Hobby and Red-footed Falcon is wider than in the Kestrel and Merlin. In the latter species this rib is the narrowest.

## Summary

### ***Falco subbuteo***:

- the processus oticus is long: the quadratum is elongated (**GH/GW** value is high),
- the processus orbitalis is narrow,
- the processus mandibularis at the sulcus intercondylaris is wide,
- the processus oticus at the incisura intercondylaris is wide.

### ***Falco columbarius***:

- the processus quadratojugalis is longest in this species,
- the processus mandibularis at the sulcus intercondylaris is narrow,
- the processus oticus at the incisura intercondylaris is narrow.

### ***Falco tinnunculus***:

- the quadratum is largest in this species,
- the processus orbitalis is short and wide.

### ***Falco vespertinus***:

- the quadratum is smallest in this species,

- the processus oticus is short and wide,
  - the processus orbitalis is long and narrow,
  - the processus mandibularis in the line of condylus lateralis and cond. caudalis is narrow, the MW/CW value is high,
  - there is no crista on the caudal edge of condylus caudalis.
- } - the quadratum is square (GH/GW value is low)

***Falco naumanni*:**

- the quadratum is small,
- the processus mandibularis in the line of condylus lateralis and cond. caudalis is narrow.

**Clavicula (furcula)**

I did not take measurements on the clavicula as there are no good measuring points on this bone. The size order of the species is the following:

**F. subbuteo > F. columbarius > F. tinnunculus > F. vespertinus >= F. naumanni**

Usually the size of the clavicula of the males of the larger species equals the size of the females of the following species.

The clavicula has quite good morphological characters. The width and curve of the scapus (corpus) claviculae, the arch of the two claviculae, the angle of them, and the shape of the sternal and omal end of the bone is characteristic for the different species.

The processus acromialis (tuberculum scapulare, LAMBRECHT, 1933) is large sized in all of the species, and approximately as high as the processus acrocoracoideus (tuberculum coracoideale, LAMBRECHT, 1933) (dorso-cranial view). In the Hobby – corresponding with the size of the end of the bone – both the processus acromialis and proc. acrocoracoideus is larger than in the Merlin. In the Kestrels both of these processus is smaller, but in the Red-footed Falcon compared to the size of the clavicula they are bigger than in the other Kestrels.

The scapus claviculae in the Hobby and Merlin is wider than in the Kestrels. In the Hobby the omal end of the bone in the line of the processus acrocoracoideus is widening very abruptly, but at the proc. acromialis is narrower again. The omal end of the bone in the Merlin, Kestrel and Lesser Kestrel only slightly widens (Plate XXXVI, Figures 6-9). The Red-footed Falcon is in a transitional position between these two forms, and the clavicula of some individuals is similar to that of the Hobby.

In lateral view the clavicula is most curved in the Kestrel and Red-footed Falcon, and the arch is steady. In the Hobby and Lesser Kestrel the curve is still quite strong, but especially at the omal and sternal ends the clavicula bends abruptly, the scapus is less curved. In lateral view the clavicula is less curved in the Merlin (Plate XXXVI, Figures 6-9).

In the Merlin the stretch of the two claviculae is small acute (caudal view). At the sternal end the two claviculae meet in acute angle, in the other species this angle is larger. The arch of the claviculae at the tip is widest, most stretched in the Kestrel. The two claviculae often meet in a straight line (180 degree). The furcula of the Red-footed Falcon also from this point of view is most similar to that of the Hobby.

In the Hobby both on the ventral and dorsal edge of the apophysis furculae there is an apex (although the dorsal is sometimes missing). In the Merlin there is only one on the ventral edge, or sometimes even this one is also missing. In the Red-footed Falcon on the ventral edge of the apophysis furculae in a small extent though, but this apex is present, or there are two smaller protrusion next to each other, and consequently the ventral edge becomes concave. On the dorsal side the protrusion is hardly detectable. In the Kestrel both of the edges are smooth, in the Lesser Kestrel too, or there is only a slight protrusion on the ventral edge (Plate XXXVI, Figures 1-5).

## Summary

### ***Falco subbuteo*:**

- the omal end of the bone is large and robust, the processus acromialis and processus acrocoracoideus are large and high,
- the scapus claviculae is widest in this species,
- the omal end of the bone is strongly widening in the line of the processus acrocoracoideus,
- there is an apex on the dorsal edge of the apophysis furculae, too.

### ***Falco columbarius*:**

- the omal end of the bone is small, the scapus claviculae is wide,
- the claviculae meet in an acute angle, and in lateral view they are least curved in this species.

### ***Falco tinnunculus*:**

- the scapus claviculae is narrow,
- the stretch of the claviculae is widest in this species,
- there is no apex even on the ventral edge of apophysis furculae.

### ***Falco vespertinus*:**

- the clavicula is small,
- the processus acromialis and processus acrocoracoideus are relatively large here compared to other Kestrels,
- the omal end of the bone is slightly widening in the line of the processus acrocoracoideus,
- in lateral view the clavicula is most curved in this species,
- on the ventral edge of apophysis furculae there are often two smaller apices next to each-other.

### ***Falco naumanni*:**

- the clavicula is small,
- the ventral edge of apophysis furculae is smooth, or there is only an almost indetectable apex on it.

## **Coracoideum**

In the length of the coracoideum there is a considerable overlap among the species. Only the Eleonora's Falcon and Lesser Kestrel separates clearly from the rest of the species (Plate VII, Figure 1). Even the coracoideum of the male Eleonora's Falcons is considerably larger than that of the female Hobby. The coracoideum of the Merlin and Red-footed Falcon is relatively long. This is shown by the fact that the size range of the Merlin and Hobby overlaps completely, and the size range of the Red-footed Falcon largely overlaps with that of the Kestrel. The maximum of the Lesser Kestrel range does not reach the minimal values of the Red-footed Falcon individuals. In the Hobby and Merlin the sexes are separating clearly by their size.

Among the studied species the coracoideum of the Hobby and Eleonora's Falcon is the most robust. The omal end of the bone is largest in these species, the corpus coracoidei is thick, the sternal end of the bone is wide. The processus lateralis at the sternal end of the bone is absent in all of the species, or maybe only its traces are found in some individuals (Plate XXXVI, Figures 10-14). But the arch of this lateral edge is characteristic for the species. This more arched in the Hobby, and sometimes even the processus lateralis is formed (Plate XXXVI, Figure 10). In the Merlin the omal end of the bone is considerably smaller, the corpus is thinner (CW), and the sternal end of the bone is also thinner than in the other species. The 5th

Diagram shows the width of the sternal end of the bone in proportion to the length of the coracoideum.

The longitudinal axis of the coracoideum is less curved in the Merlin and Red-footed Falcon than in the Hobby, Eleonora's Falcon, Kestrel and Lesser Kestrel. Hence the line of the facies articularis sternalis meets the longitudinal axis in a larger angle (gets near to the right angle), than in the latter species.

The omal end of the coracoideum in the Kestrel is relatively small, but wider than that of the Merlin. The facies articularis sternalis is wide. The lateral edge of the sternal end has the most flattened arch in this species (Plate XXXVI, Figure 12), and hence the facies articularis sternalis is often wider than the width of the end of the bone measured at the hypothesized processus lateralis.

In the Red-footed Falcon the omal end is long, the basal part of processus procoracoideus is connected lower to the corpus than in the Kestrel. The lateral edge of the sternal end is most curved in this species (Plate XXXVI, Figure 13).

The coracoideum of the Lesser Kestrel is very small, and exceptionally short. Consequently the corpus is thickest proportionally to its length in this species, and the sternal end of the bone is wider than in the Kestrel and Eleonora's Falcon.

### Summary

#### ***Falco subbuteo:***

- the omal end of the bone is extremely large, the corpus is thick,
- the lateral edge of the sternal end of the bone is usually strongly curved, sometimes even the processus lateralis is also formed,
- the longitudinal axis of the coracoideum is curved, especially so at the joint of the omal end of the bone and the corpus.

#### ***Falco columbarius:***

- the coracoideum is long, thin,
- the omal end of the bone is narrow,
- the sternal end of the bone is narrow.

#### ***Falco eleonorae:***

- the coracoideum is exceptionally large, the corpus is thick,
- the omal end of the bone is large,
- the sternal end of the bone is wide.

#### ***Falco tinnunculus:***

- the omal end of the bone is short, wide,
- the longitudinal axis of the coracoideum is most curved in this species,
- the arch of the lateral edge of the sternal end of the bone is most flattened in this species.

#### ***Falco vespertinus:***

- the coracoideum is long, the corpus is thin,
- the omal end of the bone is long, narrow,
- the longitudinal axis of the coracoideum is less curved in this species,
- the lateral edge of the sternal end of the bone is strongly curved, the processus lateralis is forming.

#### ***Falco naumanni:***

- the coracoideum is very small and short,
- the corpus is relatively the thickest in this species, the sternal end of the bone is widest.

## Scapula

The length ranges of the scapula show a great overlap among the species, but the already shown size order of the species is not changed here. Only the Eleonora's Falcon is separated without overlap from the other species. The male of the Merlin and Kestrel does largely overlap, but the size of the females is different. In the Lesser Kestrel the size of scapula of the females is smaller than in the males, and hence only the latter overlaps with the Red-footed Falcon (Plate VIII, Figure 1).

Morphologically the species form two groups. The scapula of the Eleonora's Falcon and Hobby is very similar to the large-statured Falcons, they are only smaller. The caput scapulae is considerably larger than in the Kestrels, and the corpus scapulae is widening more near the caudal edge than in the latter species. Although in the Merlin the caput scapulae is smaller (if we separate the sexes the size ranges do not overlap with the Hobby), and more similar to that of the Kestrels, but the corpus scapulae is widening near the caudal edge similarly to the Hobby (Plate XXXVI, Figure 16). The other group is formed by the Kestrels, where the caput scapulae is smaller, the corpus is thinner, and near the caudal end it is widening less. These characteristics can be most clearly observed in the Red-footed Falcon (Plate XXXVI, Figure 18).

The scapula of the Eleonora's Falcon is just slightly larger than that of the Hobby, the extremes of the two species are near to each-other.

The longitudinal axis of the scapula is usually more curved in the Kestrels than in the true Falcons, and most curved in the Red-footed Falcon (dorsal view, Plate XXXVI, Figures 15-19).

The margo dorsalis near the caudal edge of the bone in the Hobby and Eleonora's Falcon is concave, or straight at most, in the Merlin and in the Kestrels slightly convex.

### Summary

#### ***Falco subbuteo:***

- the caput scapulae is large,
- the corpus scapulae widens most near the caudal end of the bone in this species,
- the margo dorsalis is concave at the caudal end of the bone.

#### ***Falco columbarius:***

- the caput scapulae is middle-sized, the corpus is relatively wide,
- the longitudinal axis of the scapula is only slightly curved,
- the margo dorsalis is slightly convex at the caudal end of the bone.

#### ***Falco eleonora:***

- the scapula is large, the caput scapulae is especially large,
- the margo dorsalis is either concave or straight at the caudal end of the bone.

#### ***Falco tinnunculus:***

- the caput scapulae is middle-sized, the corpus is narrow,
- the longitudinal axis of the scapula is more curved,
- the margo dorsalis is convex at the caudal end of the bone.

#### ***Falco vespertinus:***

- the caput scapulae is small, the corpus is thinnest in this species,
- the longitudinal axis of the scapula is most curved in this species,
- the corpus scapulae widens only very slightly near the caudal end of the bone, the margo dorsalis is convex near the apex.

#### ***Falco naumanni:***

- the scapula is very small, the corpus scapulae is thin,
- the margo dorsalis is convex at the caudal end of the bone.

## Humerus

In the case of the humerus the morphological characteristics are less adept for the identification, the measurements of the species are more different. In general one can state that the humerus of the Hobby and Merlin – as opposed to that of the Kestrels – is very robust, both the ends of the bones and the cristae for the insertion muscles are exceptionally large.

As regards to the lengths (Plate VIII, Figure 2) it is striking that the humerus of the Eleonora's Falcon is very long, and that of the Merlin – compared to the other species – is short. Hence the Eleonora's Falcon is separated from the rest of the species, in the case of the Merlin the male specimens can be separated safely. The humerus of the latter is even shorter than that of the Lesser Kestrel. The humerus of the Merlin and Hobby can only be separated based on their length if we know the sex of the specimen. The humerus of the Lesser Kestrel is relatively long, its size almost completely overlaps with the size of the Red-footed Falcon.

The width measures of the Eleonora's Falcon are clearly separated, its values are even greater than that of the largest Hobby specimens. The Merlin and Hobby can only be separated based on these values if we know the sex of the specimen, and the Kestrel is separable from the Hobby. In the case of the Kestrels only the width values of the Kestrel and Lesser Kestrel do not overlap. The width of the corpus humeri (CW) in the Kestrel is similar to the Merlin, and both of them differs clearly from the Hobby (the width of them are smaller than in the Hobby) and from the Red-footed Falcon and Lesser Kestrel (they are bigger than the latter species). The proportion of width to the length are shown in Plate IX, Figure 1. In Plate X, Figure 1 and Plate XI, Figure 1 are demonstrated the size of the proximal end of the bone proportional to the length of the humerus.

The length ratios are lowest in the Merlin as a consequence of its very short humerus, in the Eleonora's Falcon and the Kestrels usually high, and highest in the case of the Red-footed Falcon and Lesser Kestrel. In the Eleonora's Falcon the ratios are not the highest, despite the high length values, as the width values are also very high. The humerus of the Hobby and Merlin can not be separated by the ratio values, but with the help of ratio values calculated from the measurements of the end of the bones ( $GL/PW$ ,  $GL/CT$ ,  $GL/DW$ ) they can be separated from the Kestrels and the Eleonora's Falcon. The humerus of the Lesser Kestrel similarly can be separated from that of the Kestrel.

The double curve of the longitudinal axis of the corpus humeri in caudal view is strongest in the Merlin and Kestrel, and weakest in the Red-footed Falcon (Plate XXXVII, Figures 1-5).

The morphological characters are the followings: the crista pectoralis (crista tuberculi dorsalis) is largest in the Hobby and Merlin, but in the latter the crista is shorter in distal direction than in the Hobby. The crista pectoralis is smallest in the Lesser Kestrel and Red-footed Falcon, but it is very variable in the individuals, and hence the crista in these species can be similarly sized to the Kestrel. In the male specimens the crista pectoralis is usually larger, and the angulus cristae is more pointed than in the females (Plate XXXVII, Figures 1-5).

The crista bicipitalis (crista tuberculi ventralis) is smaller and distally shorter in the Red-footed Falcon than in the Kestrel (Plate XXXVII, Figures 3-5). In the Merlin and Hobby there is a similar difference (the crista is smaller and shorter in the Merlin), but to a smaller extent.

In the Hobby the processus flexorius and the condylus dorsalis (c. radialis) is larger than in the Merlin and the Kestrels, and hence the distal end of the bone is higher in cranio-caudal direction (distal view), its outer touching polygon is nearer to a square than in the other species (Plate XXXVIII, Figures 1-2). The condylus dorsalis in the Kestrel is slightly larger than in the Red-footed Falcon.

The tuberculum supracondylare dorsale in the Hobby is usually larger than in the Merlin, and in the Red-footed Falcon larger than in the Kestrel.

At the ventral edge of the fossa musculi brachialis in the Red-footed Falcon the depression is more hollow than in the Kestrel.

### Summary

#### ***Falco subbuteo:***

- the humerus is robust, the corpus is thick,
- the crista pectoralis is very large, the crista bicipitalis is also large,
- the processus flexorius and the condylus dorsalis are large,
- the tuberculum supracondylare dorsale is relatively large.

#### ***Falco columbarius:***

- the humerus is strikingly short,
- the double curve of the longitudinal axis of the corpus humeri is strongest in this species (caudal view),
- the crista pectoralis is very large, but short in distal direction.

#### ***Falco eleonora:***

- the humerus is strikingly long, the ends of the bones are large,
- the crista pectoralis is large, but not connected with the corpus on a long section.

#### ***Falco tinnunculus:***

- the curve in longitudinal axis of the corpus humeri is strong in this species in caudal view,
- the tuberculum supracondylare dorsale is small,
- the fossa musculi brachialis is shallow.

#### ***Falco vespertinus:***

- the corpus humeri is thin, the longitudinal axis of the corpus humeri is only slightly curved in this species in caudal view.
- the crista pectoralis and crista bicipitalis are small, and the latter is distally short,
- the condylus dorsalis is small,
- the tuberculum supracondylare dorsale is relatively large.

#### ***Falco naumanni:***

- the humerus is relatively long, the corpus is thin,
- the crista pectoralis is smallest in this species.

### **Radius**

Regarding its length the radius of the Hobby and Kestrel is placed in the same range. Considerably smaller in the Merlin, the size of the former species is only reached by the larger female specimens. The radius of the male Merlin is even shorter than that of the Lesser Kestrel. The size range of the Red-footed Falcon do overlap with all the other species. In the Hobby and Merlin the sexes are clearly separated, their size follows each-other (the males are smaller, Plate XII, Figure 1).

The corpus radii is thickest in the Hobby (I had no data on the Eleonora's Falcon). But the ratio of the thickness proportional to the length of the radius (**GL/CW**), is lowest in the Merlin, and hence relatively the radius is the thickest in this species. In the Kestrels the corpus radii is considerably thinner. In the Red-footed Falcon especially the distal section is thinner than in the Kestrel (caudal view).

The measurements of the ends of the bones (**SP**, **GP**, **DW**) in the Hobby are especially

large, and hence its radius can be clearly separated from that of the Red-footed Falcon and Lesser Kestrel. From the Merlin can be separated only if we know the sex of the specimens. In the case of the Kestrel the values overlap with all the species (Plate XII, Figure 2).

The radius of the Hobby and Merlin can be separated from that of the Kestrels on the basis of the curve of the distal end of the bone (**DD**) and the **GL/DD** ratio. The tuberculum aponeurosis (tub. mediale, OTTO, 1981) at the distal end of the bone is largest in the Hobby, and the end of the bone bends more in caudal direction than in the Merlin. The ventro-proximal edge of the tuberculum aponeurosis in the Hobby is more elevated and more pointed than in the Merlin, and hence the distal end of the bone is more rectangular in caudal view than in the latter species (Plate XXXVIII, Figure 5).

Usually in the Kestrel the tuberculum aponeurosis is thicker, more knobby on the distal part than in the Red-footed Falcon (ventral view), and the end of the bone is curving stronger in a higher angle in caudal direction than in the latter. Furthermore, similarly to the formerly described two species the ventro-proximal edge of the tuberculum aponeurosis in the Kestrel is more elevated and more pointed than in the Red-footed Falcon, where the transition into the corpus radii is more arched. Consequently in the Kestrel the distal end of the bone is more square than in the Red-footed Falcon (caudal [interosseous] view, Plate XXXVIII, Figures 6-7).

In the Merlin the proximal part of the corpus radii is wider, and more flattened in cranio-caudal direction than in the Hobby. In the Kestrels the corpus radii is more cylindrical than in the former species, but the proximal section in the Kestrel is a bit more flattened than in the Red-footed Falcon.

The rib at the ventral edge of sulcus tendineus on the cranial side of the distal end of the bone is most developed in the Hobby, then follows the Merlin, and even in the Red-footed Falcon is more visible than in the Kestrel and Lesser Kestrel.

The tuberculum at the middle of the caudal edge of facies articularis radiocarpalis (later referred to as tuberculum ulnare) is almost undetectable in the Kestrel, but in the Red-footed Falcon is more elevated and separated from the tuberculum aponeurosis. Similarly in the Merlin the tuberculum ulnare is separated more from the tuberculum aponeurosis than in the Hobby.

### Summary

#### ***Falco subbuteo:***

- the corpus radii is thick, the ends of the bones are large,
- the distal end of the bone in caudal view is angular,
- the tuberculum aponeurosis is large.

#### ***Falco columbarius:***

- the radius is short, the corpus is wide and flat,
- the tuberculum ulnare is clearly separated from the tuberculum aponeurosis.

#### ***Falco tinnunculus:***

- the distal end of the bone is strongly curved in caudal direction (ventral view), its shape in caudal view is short, square,
- the distal part of the tuberculum aponeurosis is thick, knobby, the tuberculum ulnare is hardly detectable.

#### ***Falco vespertinus:***

- the corpus radii is strikingly thin, its cross-section is most cylindrical in this species,
- the tuberculum aponeurosis is smaller, the tuberculum ulnare is clearly separated.

#### ***Falco naumanni:***

- the corpus radii is thin,
- the tuberculum aponeurosis is small.



## Ulna

In the case of the length of the ulna the order of the species is similar what we saw in the case of the radius or humerus. The ulna of the Merlin is also strikingly short, but not as short as in the case of the radius. The length of the ulna of the greatest male specimens exceeds that of the smallest Lesser Kestrel. The size of the ulna of the Eleonora's Falcon is considerably greater than in any other species, but the Hobby and Kestrel overlap considerably. The length of the ulna of the Red-footed Falcon (except the Eleonora's Falcon) overlaps with all the other species, the Lesser Kestrel overlaps with the Red-footed Falcon and Merlin (Plate XIV, Figure 1). In the Hobby and Merlin the sexes separates quite well, in the Kestrels they do not.

The transverse measures of the ulna of the Hobby, due to its large size, clearly separates from the of the Red-footed Falcon and Lesser Kestrel, with a small overlap also from the Merlin, and if we distinguish the sexes even from that of the Kestrel. Similarly the Kestrel separates from the Lesser Kestrel (see the **PW**, **PH**, **DT** values), but from the Red-footed Falcon do not separates, even if the sexes are treated separately the diameters overlap. In the case of the single measured Eleonora's Falcon specimen the width of the corpus is very large, but the width of the distal end of the bone (**DT**) is relatively small (Plate XIII, Figure 2; Plate XIV, Figure 2; Plate XV, Figure 1).

With the help of the ratio values only the Kestrels and true Falcons can be separated, the **GL/DT** and **GL/PH** ratios are especially adept for this purpose.

Morphologically it is characteristic that the ulna of the Hobby is robust, the ends of the bones are large, the corpus ulnae is thick, and widens strongly towards the proximal end of the bone both in ventral and cranial view. In the Merlin in its ratios the size of the ends of the bones and the width of the corpus ulnae is similar to the Hobby, but the corpus does not widen at all towards the proximal end of the bone in ventral view, and in cranial view only less (Plate XXXVII, Figures 6-7).

The longitudinal axis of the ulna in the Hobby and Merlin is more curved (ventral view), than in the Kestrels. The proximal section of the ulna in the Merlin is more curved than in the Hobby (Plate XXXVII, Figures 6-10).

In the Kestrels the ends of the bones are smaller, the corpus ulnae is thinner, and in ventral view only slightly widens toward the proximal end. In cranial view though, the corpus stronger widens toward the proximal end in the Kestrel than in the Red-footed Falcon. The curve of the longitudinal axis of the ulna is smallest in the Red-footed Falcon and Lesser Kestrel (ventral or dorsal view), but this characteristic is hard to detect, and there are exceptions (Plate XXXVII, Figures 8-10).

The olecranon is relatively largest in the Merlin, and hence the **GL/PH** ratio is lowest in this species (Plate XIII, Figure 2). The ratio of the width and height of the proximal end of the bone (**PW/PH**) is lowest in the Merlin and highest in the Kestrel. The latter is explained by the fact that the proximal end is relatively wider in the Kestrel than in the Red-footed Falcon and Lesser Kestrel.

In the Red-footed Falcon and Merlin the dorso-cranial edge of the cotyla dorsalis (proximal end of the bone) is more elevated than in the Kestrel and Hobby.

The edge of labrum condyli at the distal end of the bone in the Red-footed Falcon connects to corpus ulnae more evenly, smoothly than in the Kestrel and Hobby where the connection is more abrupt, there is a break (caudal view). This break is the strongest in the Merlin (Plate XXXVII, Figures 6-10).

The distal end of the bone is the narrowest in the Red-footed Falcon at the condylus dorsalis in dorso-ventral direction, and the widest in the Merlin (caudal view).

## Summary

### ***Falco subbuteo:***

- the ulna is robust: the corpus is thick, the ends of the bone are large,
- the corpus ulnae is strongly widening towards the proximal end both in ventral and cranial view,
- the longitudinal axis of the ulna is strongly curved (ventral view).

### ***Falco columbarius:***

- the ulna is short, the corpus is thick, the ends of the bone are relatively large,
- the corpus ulnae is not widening towards the proximal end in ventral view,
- the longitudinal axis of the ulna is most curved in this species (ventral view),
- the olecranon is large,
- the distal end of the bone (at the labrum condyli) is widest in dorso-ventral direction in this species,
- the edge of labrum condyli is connected to the corpus ulnae abruptly (caudal view).

### ***Falco eleonorae:***

- the ulna is very long, the corpus is thick,
- the distal end of the bone is relatively small.

### ***Falco tinnunculus:***

- the corpus ulnae is thin,
- the corpus is the most widening among the Kestrels towards the proximal end in cranial view,
- the proximal end of the bone is widest among the Kestrels in this species (PW).

### ***Falco vespertinus:***

- the corpus ulnae is thin,
- the corpus is the least widening towards the proximal end in cranial view,
- the longitudinal axis of the ulna is least curved in this species (ventral view).
- the distal end of the bone (at the labrum condyli) is the narrowest in dorso-ventral direction in this species,
- the edge of labrum condyli is connected to the corpus ulnae in an arch, very smoothly (caudal view),

### ***Falco naumanni:***

- the ends of the bone are small, the corpus ulnae is relatively the thickest among the Kestrels,
- the longitudinal axis of the ulna is less curved in this species, similar to the Red-footed Falcon (ventral view).

## **Carpometacarpus**

The carpometacarpus of the Hobby and Merlin compared to the former bones is longer than in the Kestrels. This is shown by the fact that the scatter of the length measurements of the Kestrels overlaps less with the Hobby and more with the Merlin (Plate XVI, Figure 1). Hence the carpometacarpus of the Hobby can be separated from that of the Red-footed Falcon by its length, and separates from that of the Lesser Kestrel as well. Only the large females of the Merlin overlap with the small males of the Hobby. All the measured Lesser Kestrel individuals are within the size range of the Red-footed Falcon.

In the Hobby and Merlin the sexes are well separated as regards to their carpometacarpus length.

The only measured Eleonora's Falcon specimen has considerably greater **GL** value (44.0 mm) than the Hobby.

Based on the transverse measurements (**PW**, **CW**, **DT**) the Hobby can be separated from the rest of the species. The measurements of the Merlin and Kestrel are almost identical, and that of the Red-footed Falcon is only slightly lower. In the Lesser Kestrel only the transverse measure of the proximal end of the bone (**PW**) is lower than that of the Red-footed Falcon (Plate XVI, Figure 2).

The ratio values proportional to the length in the Hobby and Merlin, due to the larger ends of the bone, are lower, in the Kestrels higher. But as a consequence of the large overlaps independently they are not adept for the identification of the species, more measurements must be combined for this purpose. The greatest difference between the carpometacarpus of the Merlin and Kestrel is demonstrated by the **GL/PW** ratio, this is shown in Plate XVI, Figure 2.

In the Red-footed Falcon as a consequence of the short carpometacarpus the os metacarpus majus (metac. II) is relatively higher than in the Kestrel and Merlin (**GL/CW** value is lower). In the Lesser Kestrel this ratio is nearer to the one found in the Hobby.

Morphologically there are only slight differences among the carpometacarpus of these species. The fovea carpalis caudalis in the Kestrel is shallower, its edge is less clear than in the other species.

The usually very small processus intermetacarpalis of the Falcons in the Red-footed Falcon and Kestrel is even smaller, in the Hobby and Merlin slightly larger.

On the ventro-caudal side of the os metacarpale minus (metac. III) there is a longitudinal rib in the Kestrel, and hence the caudal side of the bone is concave. In the Red-footed Falcon this rib is much weaker, and hence the caudal side is not concave. The Hobby and Merlin is in a transitional position regarding this feature.

The os metacarpale minus widens ventrally near the proximal end, and in the Kestrel there is an apex here. In the Red-footed Falcon the widening is smaller, the apex is less pointed, and positioned nearer to the proximal end of the bone. In the Hobby and Merlin the apex is hardly visible, this part is arched instead.

In the Hobby the distal end of the spatium intermetacarpale (at the synostosis metacarpalis distalis) is more rounded than in the other species. In the Kestrel this part is narrower, and in the Merlin becomes pointed. The Red-footed Falcon is in intermediate position between the Kestrel and Merlin (Plate XXXVII, Figures 11-13).

The longitudinal axis of os metacarpale majus and os metacarpale minus in the Merlin diverges in distal direction, and almost parallel in the Kestrels. The Merlin is in intermediate position (Plate XXXVII, Figures 11-13).

The facies articularis digitalis minor (dig. III) in the Red-footed Falcon is lower, elevated less in distal direction than in the other species. This part is most elevated in the Merlin.

### Summary

#### ***Falco subbuteo:***

- the width measurements of the carpometacarpus are very large,
- the ventral edge of the proximal part of os metacarpale minus is arched, there is almost no apex,
- the longitudinal axis of os metacarpale majus and os metacarpale minus diverges in distal direction,
- the distal end of spatium intermetacarpale is less arched, blunt.

#### ***Falco columbarius:***

- the ends of the bone are relatively large,
- the ventral edge of the proximal part of os metacarpale minus is arched, there is almost no apex,

- the distal end of spatium intermetacarpale is pointed,
- the facies articularis digitalis minor is high.

***Falco eleonorae*:**

- the carpometacarpus is very large, long.

***Falco tinnunculus*:**

- the fovea carpalis caudalis is shallow,
- the ventral edge of the proximal part of os metacarpale minus is pointed,
- on the ventro-caudal side of os metacarpale minus there is a strong rib, the caudal side is concave,
- the distal end of spatium intermetacarpale is narrow, but rounded,
- the facies articularis digitalis minor is high.

***Falco vespertinus*:**

- the carpometacarpus is relatively short,
- the apex on the ventral edge of the proximal part of os metacarpale minus is less pointed, and positioned nearer to the proximal end,
- the rib on the ventro-caudal side of os metacarpale minus is small, the caudal side is not concave,
- the facies articularis digitalis minor is low.

***Falco naumanni*:**

- the proximal end of the bone is small,
- the os metacarpale majus is relatively thick (GL/CW value is low).

## ***The digits of the wing (ossa digitorum manus)***

### **Phalanx digiti alulae (phalanx 1 digiti 1 anterior)**

In the case of the single phalanx of the first digit of the wing the lengths of almost all the species overlap. Even the phalanx of the Hobby separates only from that of the Lesser Kestrel, from the other species only if we separately treat the sexes. The phalanx of the Merlin, Red-footed Falcon and Lesser Kestrel is approximately similar in length, and that of the Kestrels is only slightly longer (Plate XVII, Figure 1).

In the Hobby the proximal end of the bone is very large, and hence can be easily separated from the rest of the species. Similarly the Kestrel separates from the Red-footed Falcon and Lesser Kestrel. In the Lesser Kestrel the phalanx is relatively long, and the proximal end of the bone is wide, but the height of the proximal end of the bone (**PH**) is very low. And hence this species with the help of the **GL/PH** and **PW/PH** ratios easily separated from the Red-footed Falcon. The **GL/PH** ratio also separates this phalanx of the Red-footed Falcon and Kestrel (Plate XVII, Figure 2).

In the Hobby the phalanx is wide, and only narrows strongly at the apex (dorsal view), in the Merlin the phalanx is narrower, and narrows in distal direction very evenly (Plate XXXVIII, Figures 12-13).

In the Hobby the protrusion on the dorso-caudal edge of the corpus phalangis is located nearer to the apex of the phalanx than in the Merlin. The part between the caudal edge of the phalanx and the rib on the dorsal side of the corpus in the Merlin is strongly concave, in the Hobby is more flattened. In the Merlin the edges on the dorsal side of the corpus phalangis are even more prominent than in the Hobby.

In the Kestrel the phalanx is narrower than in the former two species, but among the Kestrels it is still quite wide. The protrusion (apex) on the dorsal side is smaller, and the depression between the caudal and dorsal edge on the corpus is shallow.

The phalanx of the Red-footed Falcon compared to the Kestrel is considerably narrower, the phalanx distal from the proximal end (the neck of the phalanx) abruptly narrows down. The rib on the dorsal side of the corpus phalangis is well developed, but apex is almost not detectable, and towards the caudal edge the depression is shallow. On the ventral side, the depression distally from the proximal end of the bone is smaller than in the Kestrel. The cranial edge in the Red-footed Falcon is concave, in the Kestrel on the distal part straight or undulating (Plate XXXVIII, Figures 14-16).

### Summary

#### ***Falco subbuteo:***

- the phalanx is long and wide,
- the proximal end of the bone is very large,
- the phalanx only on its distal half narrows strongly (dorsal view),
- the apex at the dorso-caudal edge of the corpus phalangis is located nearer to the distal end of the bone than in the other species.

#### ***Falco columbarius:***

- the phalanx is short,
- the proximal end of the bone is relatively large,
- the phalanx narrows in distal direction evenly on its whole length (dorsal view),
- the apex at the dorso-caudal edge of the corpus phalangis is located more far away from the distal end of the bone than in the Hobby,
- the depression on the dorso-caudal edge of the proximal half of the phalanx is the largest in this species.

#### ***Falco tinnunculus:***

- the phalanx is wide as compared to other Kestrels,
- the proximal end of the bone is the largest among the Kestrels,
- the apex and depression on the dorso-caudal edge of the corpus phalangis are hardly visible.

#### ***Falco vespertinus:***

- the phalanx is very narrow and relatively long,
- the proximal end of the bone is relatively small and narrow,
- the phalanx distally from the proximal end abruptly narrows (dorsal view),
- all the cranial edge of the phalanx is concave.

#### ***Falco naumanni:***

- the phalanx is relatively long,
- the proximal end of the bone is wide and flat.

### **Phalanx proximalis digiti majoris (phalanx 1 digiti 2 anterior)**

The phalanx proximalis digiti majoris similarly to the phalanx discussed before is the largest in the Hobby. Then follows the Kestrel, then the Merlin and the Red-footed Falcon, in which the phalanx is approximately equal. The Lesser Kestrel has got the smaller phalanx here (Plate XVIII, Figure 1).

In the Hobby the sizes are so large that this species is safely separated from the Merlin and Red-footed Falcon, only the **PH** and **DH** values overlap. The Kestrel overlaps with its absolute values with all of the species, while the Lesser Kestrel only reaches the minimal value of the Red-footed Falcon.

This phalanx of the Merlin can be easily separated from that of the Kestrels, since the size

values of the proximal end of the bone (**PW, PH**) are large (**GL/PW** value is low), and the height of the distal end of the bone (**DH**) is relatively small. Hence the **PH/DH** ratio is higher in the Merlin than in the rest of the species. This value is the lowest in the Kestrels. Furthermore in the Merlin the **PH-DH** value is also high, e.g. the pila cranialis narrows more in distal direction than in the other species (cranial view). If we calculate the ratio of this value and the total length of the phalanx (which is low anyway in the Merlin), we get a valuable ratio (**GL/PH-DH**).

As a consequence of the small proximal end of the bone in the Lesser Kestrel the **GL/PW** value is high.

The phalanx of the Kestrel and Red-footed Falcon can not be safely separated by the size measurements, only the small and large individuals can be identified.

In the Kestrel the facies articularis metacarpalis curves less than in the other species, where the facies bends in right angle on the dorsal part (proximal view) (Plate XXXVIII, Figures 3-4). In the Kestrel the caudal edge of the phalanx is usually more arched, and its plate widens slightly in distal direction, while in the rest of the species the middle section of the caudal edge is straighter, and approximately parallel with the cranial edge (Plate XXXVII, Figures 14-15).

In the Red-footed Falcon in cranial view the pila cranialis stronger narrows distally from the proximal end of the bone than in the Kestrel. This is partly due to the fact that in the Red-footed Falcon the tuberculum in the middle of the ventral edge of the proximal end of the bone is larger than in the Kestrel.

### Summary

#### ***Falco subbuteo:***

- the absolute measurements of the phalanx are very large,
- the proximal end of the bone is wide (**PW/PH** value is high).

#### ***Falco columbarius:***

- the phalanx is short,
- the proximal end of the bone is relatively large (**GL/PW** value is low),
- the **GL/PH-DH** value is very low.

#### ***Falco tinnunculus:***

- the facies articularis metacarpalis curves less than in the other species (proximal view),
- the caudal edge of the phalanx is more rounded than in the other species, and widens slightly in distal direction (dorsal view).

#### ***Falco vespertinus:***

- the proximal end of the bone is relatively small,
- the **GL/PH-DH** value is high,
- the tuberculum in the middle of the ventral edge of the proximal end of the bone is large.

#### ***Falco naumanni:***

- this phalanx is the smallest in this species,
- the proximal end of the bone is relatively small (**GL/PW** value is high).

### **Phalanx distalis digiti majoris (phalanx 2 digiti 2 anterior)**

This phalanx is the largest in the Hobby, and the smallest in the Merlin. There is a considerable difference between these species. They can be distinguished both by the length of the phalanx and the size of the articular part, and even the sexes can be distinguished.

Although the Kestrels are different regarding their size, the phalanges are approximately equal, and are in intermedier position between the former species (Plate XVIII, Figure 1).

In the Kestrel the proximal end of the bone is relatively wider (**PW**) than in the Red-footed Falcon and Lesser Kestrel, and hence the **GL/PW** ratios are lower, the **PW/PH** ratios are higher than in the latter two species. In the Hobby these ratios are similar to the ones found in the Red-footed Falcon (also the **PW/PH** value in the Merlin), but it is caused instead of low **PW** values by the high **GL** and **PH** values. In the Merlin due to the short phalanx all the ratios calculated with **GL** are very low.

In the Hobby the corpus phalangis in caudal view is narrow, its edges are more or less parallel, its apex is truncated and tilted. In the Merlin the corpus is wider, its edges are converging slightly towards the apex, and the apex is more blunt, or truncated in right angle. The phalanx of the Red-footed Falcon is similar to that of the Hobby, the corpus is long and thin in caudal view, its edges are parallel. In the Kestrel the phalanx is relatively shorter, the corpus is slightly wider, and its edges are slightly converging toward the apex. The apex is sloping, truncated and pointed in both species. In the Lesser Kestrel the corpus phalangis is narrow, at the collum (it is located next to the proximal end of the bone) widens strongly toward the proximal end (Plate XXXVIII, Figures 17-21).

### Summary

#### ***Falco subbuteo:***

- the phalanx is large and long,
- the proximal end of the bone is high (**PH**),
- the corpus phalangis is narrow, its edges are more or less parallel (caudal view),
- the apex is pointed, truncated and tilted.

#### ***Falco columbarius:***

- the phalanx is extremely short,
- the proximal end of the bone is high (**PH**),
- the collum part and the corpus are wide, its edges are converging toward the apex (caudal view),
- the apex is blunt or truncated in right angle.

#### ***Falco tinnunculus:***

- the phalanx is relatively short,
- the proximal end of the bone is wide (**PW**),
- the corpus is wider, its edges are slightly converging toward the apex (caudal view).

#### ***Falco vespertinus:***

- the phalanx is relatively long,
- the proximal end of the bone is narrow (**PW**),
- the corpus is narrow, its edges are parallel (caudal view).

#### ***Falco naumanni:***

- the phalanx is relatively long,
- the proximal end of the bone is narrow (**PW**),
- the collum part is wide.

### **Phalanx digiti minoris (phalanx 1 digiti 3 anterior)**

The single phalanx of the third digit shows similarities to the formerly described phalanges. The Hobby has got the longest phalanx, but can only be separated from the Merlin if we distinguish the sexes. The phalanx of the Kestrel regarding its size is in between the former

two species, and that of the Red-footed Falcon and Lesser Kestrel is more similar to that of the Merlin.

The phalanx is the narrowest in the Merlin (**GW**), and its height (**GH**) is small, and these features separates it from the Hobby quite well. The width measures even separates it more or less from the Kestrel.

From the ratio values the **GW/PW** is most adept for the separation of the Hobby and Merlin. The **GW/GH** ratio is approximately equal, as the phalanx of the Hobby is wide and high, and that of the Merlin is narrow and flat, and hence the two proportions are similar. In the Kestrels the phalanx is relatively wide and flat, and hence the **GW/GH** values are higher than in the former species. They are the highest in the Lesser Kestrel.

In the male specimens of the Kestrels compared to its length the phalanx is narrower (**GL/PW** and **GL/GW** values are higher) than in the females.

Morphologically in all the species the individual variability is great, but usually the distal part of the phalanx of the Hobby is narrower and its apex is more pointed than in the Merlin. The cranial edge is straighter, in the Merlin this is in the middle of the corpus in the line of *prominentia caudalis* is broken in cranial direction (Plate XXXVIII, Figure 9).

In the Kestrels the distal part of the phalanx is even narrower than in the Hobby (Plate XXXVIII, Figures 10-11). In the Kestrel in cranial view the corpus phalangis abruptly narrows distally from the proximal end of the bone.

In the Red-footed Falcon the phalanx in average narrower than in the other species, the *prominentia caudalis* is placed longitudinally towards the middle (Plate XXXVIII, Figure 11).

### Summary

#### ***Falco subbuteo:***

- the phalanx is long, wide and thick, the **GW/PW** value is high,
- the distal part of the phalanx is narrow, the apex is pointed,
- the cranial edge is approximately straight.

#### ***Falco columbarius:***

- the phalanx is short, narrow and flat, the **GW/PW** value is low,
- the cranial edge is curved, sharply breaking in the line of *prominentia caudalis*.

#### ***Falco tinnunculus:***

- the phalanx is wide and relatively flat,
- in cranial view the phalanx abruptly narrows distally from the proximal end of the bone.

#### ***Falco vespertinus:***

- the phalanx is relatively narrow,
- the *prominentia caudalis* in longitudinal direction runs almost at the middle of the phalanx.

#### ***Falco naumanni:***

- the phalanx is wide and flat, the **GW/GH** value is the highest.

### **Sternum**

The sternum of the true Falcons is considerably larger than that of the Kestrels. Between the two group the length measures are well separated, considerable overlap is only found between the male of Merlin and Kestrel. But the length measures of the sternum of the Merlin and Hobby overlap considerably. The size range of the Hobby males is coincides with that of the females of the Merlin. The sternum size of the Eleonora's Falcon is considerably larger even



than the size of the Hobby. Among the Kestrels the Kestrel has especially short sternum. This is demonstrated by the fact that its length measures largely overlap with that of the Red-footed Falcon, only the maximum values are different. Even the maximum values of the Lesser Kestrel sternum is reaching the minimum values of the Kestrel (Plate XIX, Figure 1).

The sternum of the true Falcons morphologically considerably differs from that of the Kestrels. Their sternum is longer, the carina sterni is higher and longer, and hence the margo cranialis bends more forward (the apex carinae extends more forward) than in the Kestrels. The sternum of the Hobby and Merlin is very similar, often impossible to distinguish. Some minute differences can be still found: the sternum of the Hobby is a bit wider at the same length (**GL/GW** value is higher, Plate XIX, Figure 2), and the crista sterni is higher (**CH/GW** value is higher (Plate XX, Figure 1), than in the Merlin. In the Hobby the margo cranialis and margo ventralis is more curved (the latter especially on the caudal section), than in the Merlin (Plate XXXIX, Figures 1-2).

The spina externa of rostrum sterni in the Hobby is thicker, and at the middle sharply breaking upwards (in dorsal direction). In the Merlin the spina externa is thinner, straight and cylindrical.

The processus cranio-lateralis compared to the tip of spina externa in the Hobby is positioned caudally more backwards than in the Merlin. This demonstrated by the fact that the angle formed by the lines connecting the tips of the processus cranio-laterales on the two sides with the apex of spina externa is more acute in the Hobby than in the Merlin (Plate XXXIX, Figures 6-7).

The last (caudally positioned) processus costalis in the Merlin is positioned caudally more backwards than in the Hobby. And hence in the Merlin the last processus costalis is positioned at the half of the distance between the apex of processus cranio-lateralis and the caudo-lateral edge of the sternum. This is positioned in the Hobby cranially more forward, and hence the costal section is shorter.

Morphologically the sternum of the Eleonora's Falcon is similar to that of the Hobby, but due to its larger absolute size it is easily distinguished from that. On one of the examined specimens the shape of the margo ventralis carinae and margo cranialis carinae is more similar to that of the Merlin, as they were less curved than in the Hobby.

The ratio of the length and width of the sternum (**GL/GW**) differs among the Kestrels. The shortest and widest sternum is found in the Kestrel, then comes the Lesser Kestrel. In the Red-footed Falcon this ratio equals with that of the Merlin, that is the sternum is more elongated (Plate XIX, Figure 2).

The carina sterni is shortest in the Kestrel (**CL**). In the Red-footed Falcon and Lesser Kestrel it is a bit longer, but still much shorter than in the true Falcons (Plate XXXIX, Figures 3-5). The relative height of the carina sterni (**CH/GW**) does not differ significantly among the Kestrels, but the average value is still higher in the Red-footed Falcon (0.72) than in the Kestrel (0.70). Plate XX, Figure 1 shows the height of the carina sterni proportional to its length, in a way that through the ratio of the length and width of the sternum eliminates the absolute size differences of these species.

In the Red-footed Falcon the margo cranialis carinae bends more forward, and hence the carina sterni is longer, and consequently the apex carinae is more pointed than in the Kestrel and Lesser Kestrel. In some specimens the margo cranialis is more curved, in these the carina sterni is very similar to that of the Hobby (Plate XXXIX, Figure 5). In the Red-footed Falcon the margo ventralis carinae is more curved than in the rest of the species.

In the Kestrels the shape of spina externa is variable, both the forms similar to the Hobby and Merlin can be found. The spina interna is shorter than in the true Falcons, the shortest in the Kestrel, in cranial direction often it does not extend further than the labra dorsalia.

The angle formed by the tip of the spina externa and the two processus cranio-laterales in

the Kestrels is more obtuse-angled than in the true Falcons, the most obtuse in the Kestrel and Lesser Kestrel (the front of the sternum is more blunt, flattened in dorsal view) (Plate XXXIX, Figures 6-9).

The length of the costal section of margo costalis in the Kestrel is similar to the Merlin, in the Red-footed Falcon to the Hobby, that is in the Kestrel the last (caudally positioned) processus costalis is placed at the middle of the lateral edge of the sternum, in the Red-footed Falcon more towards the front.

The fenestra sterni in the Red-footed Falcon and Lesser Kestrel open towards the caudal edge (incisura sterni), either on one or on both sides is missing. In the rest of the species such anomalies occur very rarely.

### Summary

#### ***Falco subbuteo:***

- the sternum is long,
- the carina sterni is long, and especially high,
- the apex carinae reaches till the line of rostrum sterni, the apex of carina sterni is pointed, acute angled, (lateral view),
- the margo cranialis carinae is usually arched along all its length (lateral view),
- the spina externa is thick and curved.

#### ***Falco columbarius:***

- the carina sterni is long, high,
- the apex carinae reaches till the line of rostrum sterni, the apex of carina sterni is pointed, acute angled, (lateral view),
- the ventral half of margo cranialis carinae is straight (lateral view),
- the spina externa is thin and straight.

#### ***Falco eleonora:***

- the sternum is large,
- the carina sterni is long, high,
- the apex carinae reaches till the line of rostrum sterni, the apex of carina sterni is pointed (lateral view),
- the ventral part of the margo cranialis carinae is straight (lateral view).

#### ***Falco tinnunculus:***

- the sternum and the carina sterni is short,
- the apex carinae does not reach at all till the line of rostrum sterni, the apex of carina sterni is not pointed, or at most is right angled (lateral view),
- the ventral part of the margo cranialis carinae is straight (lateral view),
- the spina interna is short.

#### ***Falco vespertinus:***

- the sternum and the carina sterni is moderately long,
- the apex carinae does usually reach till the line of rostrum sterni or gets near to it, the apex of carina sterni is pointed, or at most is right angled (lateral view),
- the margo ventralis carinae is arched strongly, while the margo cranialis carinae more or less.
- the fenestra sterni is frequently open in caudal direction (incisura sterni), or completely missing.

#### ***Falco naumanni:***

- the sternum is small and the carina sterni is short,

- the apex carinae does not reach at all till the line of rostrum sterni, the apex of carina sterni is not pointed, or at most is right angled (lateral view),
- the ventral part of the margo cranialis carinae is straight (lateral view),
- the fenestra sterni is frequently open in caudal direction (incisura sterni).

### Pelvis (os coxae, synsacrum)

In the case of the pelvis the length measurements of the species overlap considerably, and hence these measurements are not adequate to tell apart the species. But the comparatively longer pelvis of the Red-footed Falcon is very prominent. The following equalities were found (Figure 12):

**F. subbuteo** ♂ ≅ **F. tinnunculus** ♂ ≅ **F. columbarius** ♀

**F. columbarius** ♂ ≅ **F. vespertinus** ♂ ≅ **F. naumanni** ♂, ♀

The length of the pelvis (which is proportional to the length of the synsacrum what was measured) is not larger in the case of the female Hobby and Merlin than in the Kestrel females (contrasted with the sternum), but in the case of the latter species the range of measured lengths is wider. Although in the Eleonora's Falcon the average value is the largest, but the lower part of its range is overlapping that of the Hobby and Kestrel. Consequently the ratio of the length of the synsacrum and the width of the pelvis measured at the antitrochanteres (**ML/GW**) is higher in the Kestrel and the Red-footed Falcon than in the Hobby, Merlin and has Eleonora's Falcon. The pelvis of the Lesser Kestrel is similar to that of the true Falcons in this respect. Plate XXII, Figure 1 shows the lengths of the synsacrum and the width of the pelvis measured at the antitrochanteres in the studied species. The dashed line indicates value **ML/GW**=1.3. The specimens above the line have shorter, and below the line more elongated pelvis.

The preacetabular part of the pelvis in the Red-footed Falcon is relatively wider (the value of **AW/MW** is lower) than that of the rest of the species. This part is the narrowest in the Merlin.

Also characteristic for each of the species is the ratio of the distance between the acetabula and the diameter of the foramen acetabuli (**AA/AD**). This ratio helps in the differentiation of the pelvis of these species, and explicitly tells apart the Red-footed Falcon and the Lesser Kestrel from the rest. The rank of the ratios of the foramen acetabuli and the distance between the acetabula is the following:

**F. tinnunculus** > **F. columbarius** > **F. subbuteo** > **F. eleonorae** > **F. vespertinus** > **F. naumanni**

The following features can be found on the pelvis of the certain species: from lateral view the caudal part of the pelvis is more flattened in dorso ventral direction in the case of the Hobby than in the Merlin. Similar is the case of the Kestrel and the Red-footed Falcon, the pelvis of the Red-footed Falcon is more flattened.

In the Kestrel the synsacrum longitudinally a bit curved, rounded. This feature is visible from the lateral view on the dorsal contour line (Plate XL, Figure 7). This line is more or less straight in the rest of the species.

In the Kestrels, especially in the Red-footed Falcon, the *spina iliocaudalis* (SCHMIDT-BURGER, 1982) is well detectable, while in the case of the Hobby and Merlin it is hardly detectable or missing.

The margo ischiocaudalis (SCHMIDT-BURGER, 1982) is more or less straight in the Merlin, while in the other species it is concave (incisura marginis caudalis) because of the presence of processus marginis caudalis at the ilioischadic synostosis (Plate XL, Figures 5-9).

The processus iliolateralis caudalis (SCHMIDT-BURGER, 1982) in the Hobby bigger than that of the Merlin, and bigger in these two than in the Kestrels. Although in some Red-footed Falcon individuals it can be considerably large (Plate XL, Figures 1-4).

In the Kestrel the processus iliolateralis cranialis (SCHMIDT-BURGER, 1982) is larger than in the other species, the antitrochanter is larger than in the Red-footed Falcon. In the case of the Kestrel the best identification feature is that the alae ischiorum in the lateral direction less diverging (the  $GW/AW$  value is lower) than in the other species (caudal view Plate XLI, Figures 1-4). The divergence of the alae ischiorum in the Red-footed Falcon and the Hobby is the largest. The average value of  $GW/AW$  in the case of Red-footed Falcon might be 1.00 or higher.

In the Red-footed Falcon the pars renalis of pelvis is more rounded, and hence the dorsal side is more convex than in the Kestrel. The number of foramina intertransversaria is higher (8-12), while in the other species usually only 4 can be found the rest is ossified.

The divergence of the margines laterales of the ala preacetabularis ilii into cranial direction, and hence the cranial width of the pelvis is very variable. This feature is not adept for the identification of the species.

### Summary

#### ***Falco subbuteo:***

- the pelvis is wide,
- the processus iliolateralis caudalis is large (dorsal view),
- the alae ischiorum diverge into lateral direction stronger (caudal view), the value of  $GW/AW$  is high.

#### ***Falco columbarius:***

- the pelvis is wide,
- the preacetabular part is comparatively narrow ( $AW/MW$  value is high),
- the diameter of the foramen acetabuli is large,
- the margo ischiocaudalis is approximately straight (lateral view).

#### ***Falco eleonora:***

- the pelvis is large, wide,
- the processus iliolateralis caudalis is large.

#### ***Falco tinnunculus:***

- the pelvis is long and narrow,
- the synsacrum longitudinally curved, rounded (lateral view)
- the diameter of the foramen acetabuli is large, the distance between the acetabula is small,
- the processus iliolateralis cranialis is large,
- the alae ischiorum are almost no diverging in lateral direction (caudal view),  $GW/AW$  value is low.

#### ***Falco vespertinus:***

- the pelvis is relatively large and long,
- the preacetabular part is relatively wide, ( $AW/MW$  value is low),
- the diameter of the foramen acetabuli is small, the distance between the acetabula is large,
- the antitrochanter is small,
- the spina iliocaudalis is the largest in this species,
- the alae ischiorum are strongly diverging in lateral direction (caudal view),  $GW/AW$  value is high,

- the pars renalis of pelvis is strongly rounded,
- the number of foramina intertransversaria is high (8-12).

***Falco naumanni:***

- the pelvis is wide,
- the diameter of the foramen acetabuli is small, the distance between the acetabula is large.

### **Pygostylus**

The size and shape of the pygostylus show considerable variability even within a species, and hence can not be correctly identified. The pygostylus of the Hobby and Merlin can be separated according to its length only if we know the sex of the specimen. The pygostylus of the Kestrels is long if we compare it with that of the Hobby and Merlin, and hence the overlap even between the Hobby and the Red-footed Falcon is large (Plate XXI, Figure 2).

The pygostylus is highest proportionally to its length in the Lesser Kestrel (**GH**, but only near to the base), in the Red-footed Falcon it is the shortest. In both species the height of the lamina pygostyli decreases towards the margo dorsalis, but in the Kestrel on the contrary it increases. In the Red-footed Falcon and Lesser Kestrel the lamina pygostyli is strongly narrowing in the middle section (cranio-caudal direction). In the Merlin the lamina pygostyli is also thinner in the middle section than in the Kestrel and Hobby (lateral view, Plate XLI, Figures 5-8).

The margo dorsalis in the Red-footed Falcon and Lesser Kestrel is usually smaller and more curved than in the Kestrel. In the Merlin too, the margo dorsalis is also shorter than in the Hobby, but in the latter the edge is more curved (Plate XLI, Figures 5-8).

In the Merlin and the Hobby the basis pygostyli is on average wider than in the Kestrels (**GW**), and on both sides of the lamina pygostyli from the middle of the margo caudalis to the middle of the facies articularis cranialis there is a rib. In the case of the Kestrels they are either missing or barely visible.

### Summary

***Falco subbuteo:***

- the lamina pygostyli is high on the middle section (lateral view),
- the basis pygostyli is wide (**GW** value),
- the margo dorsalis long, usually curved,
- on the sides of the lamina pygostyli there are two prominent ribs.

***Falco columbarius:***

- the lamina pygostyli is a bit narrower at the middle (lateral view),
- the basis pygostyli is wide (**GW** value),
- the margo dorsalis is shorter, usually straight,
- on the sides of the lamina pygostyli there are two prominent ribs.

***Falco tinnunculus:***

- the lamina pygostyli is still high near the margo dorsalis (lateral view),
- the basis pygostyli is narrow (**GW** value),
- the margo dorsalis is long, usually straight.

***Falco vespertinus:***

- the whole lamina pygostyli is low (**GH** value), sometimes strongly narrower at the middle (lateral view),
- the margo dorsalis is comparatively short, often curved.

***Falco naumanni:***

- the whole lamina pygostyli is high only at the basis, sometimes strongly narrower at the middle (lateral view),
- the basis pygostyli is narrow (**GW** value).

**Femur**

The ratios of femur lengths between the studied species is different from the formerly described bones. The femur of the Eleonora's Falcon is comparatively short, while the femur of the Merlin is quite long, and hence the femur lengths of the two species considerably overlap. It is just the opposite of the formerly described wing measurements. The Hobby, Merlin and Kestrel is more or less equal in this feature, but on average the Merlin has the longest femur and the femur of the Kestrel is usually longer than that of the Hobby. The femur of the Red-footed Falcon and Lesser Kestrel is very short, and hence can be separated from the other species on the basis of the length very easily (Plate XXIII, Figure 1). The transverse measurements are sometimes overlapping, especially so in the case of the height values of the end of the bones (**PH, DH**).

In the Merlin compared to the length the width measurements are lower than in the Hobby, Eleonora's Falcon and Kestrel. And hence the **GL/PW**, the **GL/PH** and **GL/CW** (etc.) values are high. The femur of the Hobby can be separated from that of the Kestrel's by the **GL/CW** ratio quite well, as the femur of the Hobby is wider. The two species is also separated by the **PW/PH** ratio, as the trochanter femoris is larger, the crista trochanteris is higher and more prominent in the Kestrel than in the Hobby. The relation of these two values is shown in Plate XXIII, Figure 2.

In the Eleonora's Falcon the end of the bone are wide (**PW, DW**), so by these values both in absolute terms but also as compared to the length (**GL/PW**) this species is easily separated from the rest (Plate XXIV, Figure 1).

The femur of the Lesser Kestrel is very hard to tell apart from the femur of the Red-footed Falcon, but the transverse measurements of the Lesser Kestrel are a bit larger. The corpus femoris is relatively wider, the diameter of the caput femoris is larger, the distal end of the bone is wider and the trochanter femoris is a bit larger of the Lesser Kestrel than in the Red-footed Falcon. Consequently the femurs of the two species can be separated by the **GL/CW**, **GL/CD**, **GL/DW** and **GL/PH** ratios (Plate XXIV, Figure 2). The situation is further complicated by the fact that the sexes of the same species sometimes exhibit larger differences than two different species (for example **GL/CW** value), namely in the females the transverse measurements are larger and the bones are wider than in the males.

Morphologically the femur has very good identification features. Its longitudinal axis in lateral view is more curved in the Merlin and Kestrel than in the Hobby and Red-footed Falcon. The corpus femoris is the most curved in the case of Merlin, and less curved in the Red-footed Falcon. In the Kestrel the curve of the corpus is not even, at the distal end there is a stronger breaking point (Plate XLI, Figures 9-12).

In the Merlin the width of corpus femoris is more even, toward the ends of the bone less widening than in the other species. This feature is especially prominent at the medial side of the proximal end of the bone (cranial view), as in the case of the Merlin the contour line is straight till the collum femoris, while in the Hobby it is weakly in the Kestrel strongly curved into medial direction. The Red-footed Falcon is in intermediate position between the Hobby and Kestrel regarding this feature. The corpus femoris most narrow at the middle in the Kestrel (Plate XLI, Figures 13-16).

The shape of trochanter femoris is also different in the studied species. In lateral view the

crista trochanteris in the Kestrel is high, semicircle in shape, and at the cranial side attaches to the corpus femoris with a strong breaking (lateral view). In the Merlin the crista trochanteris is smaller, on the cranial side less rounded, and evenly attaches to the corpus. The Hobby and Eleonora's Falcon are in intermediate position in between these extremes, but in shape they are closer to the Merlin. In the Red-footed Falcon and Lesser Kestrel the shape of crista trochanteris is similar to that of the Kestrel's, but at the proximal part more flattened (Plate XLII, Figures 1-5).

In the Kestrel and the Red-footed Falcon the tuberculum at the proximal end of linea intermuscularis cranialis is smaller and more pointed in proximal view than in the Hobby and Merlin (Plate XLII, Figures 6-10).

In cranial view the angle of the axis of the caput femoris and collum femoris and the longitudinal axis of the femur in the Merlin is acute, in the Hobby and Eleonora's Falcon it is approximately right angle, while in the Kestrels obtuse-angled. Consequently in the Merlin the proximal edge of the collum femoris (facies articularis antitrochanterica) is not concave, while in the Kestrels this arch is quite large (cranial view, Plate XLI, Figures 13-16). Further more the angle of the lateral side of trochanter femoris and the longitudinal axis of the corpus femoris is bigger in the Merlin than in the rest of the species. The result of these two features combined in the Merlin is that the proximal end of the bone is more strongly deviate to the medial direction from the longitudinal axis of the corpus (cranial view, Plate XLI, Figure 14).

The two cristae of the trochlea patellaris (SCHMIDT-BURGER, 1982) at the distal end of the bone (Rollkamm in German) is different in size in the different species. In the Hobby the medial crista is higher than the lateral compared to the Merlin. In both of these species the medial crista is higher than in the Kestrels (distal view). Hence in the latter species the sulcus patellaris is more shallow than in the Hobby and Merlin. In the Hobby the sulcus patellaris is not only deeper but also wider than in other species.

In the Hobby and Merlin the cristae of trochlea patellaris are longer, and start sooner proximally and hence the distal end in medial view is more elongated than in the Kestrels.

### Summary

#### ***Falco subbuteo:***

- the ends of the bones are relatively large, the corpus femoris is thick,
- the longitudinal axis of the femur is only a little bit curved (lateral view),
- the corpus femoris towards the ends of the bone is getting thicker slightly (cranial view),
- the crista trochanteris is lower, on the cranial side a little bit less curved,
- the axis of caput femoris and collum femoris is perpendicular to the longitudinal axis of the femur (cranial view),
- the medial crista of trochlea patellaris is a lot higher than the lateral crista (distal view),
- the cristae of trochlea patellaris are long
- the sulcus patellaris is wide and deep.

#### ***Falco columbarius:***

- the femur is very long and hence all the transverse measurements are relatively lower than in the rest of the species,
- the longitudinal axis of the femur is strongly curved (lateral view),
- the whole length of the corpus femoris is basically equally thick (cranial view),
- the corpus femoris on the medial side towards the proximal end does not get thicker (cranial view),

- the crista trochanteris is small, on the cranial side a little bit less curved (lateral view),
- the collum femoris on the proximal margin is not curved,
- the axis of caput femoris and collum femoris is sharp angled to the longitudinal axis of the femur, the proximal end of the bone deviates into medial direction (cranial view),
- the medial crista of trochlea patellaris is a lot higher than the lateral crista (distal view),
- the cristae of trochlea patellaris are long.

***Falco eleonora*:**

- the femur is relatively short and the ends of the bones are thick (PW, DW),
- the crista trochanteris is lower, on the cranial side a little bit less curved,
- the axis of caput femoris and collum femoris is perpendicular to the longitudinal axis of the femur (cranial view),
- the medial crista of trochlea patellaris is a lot higher than the lateral crista (distal view).

***Falco tinnunculus*:**

- the femur is long,
- the longitudinal axis of the femur is strongly curved, especially so on the distal part (lateral view),
- the corpus femoris towards the ends of the bone (mainly towards the proximal end) is getting thicker abruptly (cranial view),
- the crista trochanteris is high, shaped as a curve (lateral view),
- the axis of caput femoris and collum femoris is obtuse-angled to the longitudinal axis of the femur (cranial view),
- the tuberculum at the proximal end of the linea intermuscularis cranialis is small and pointed (proximal view),
- the medial crista of trochlea patellaris is only a bit higher than the lateral crista (distal view),
- the cristae of trochlea patellaris are short.

***Falco vespertinus*:**

- the femur is very short, and the transverse measurements are also low,
- the longitudinal axis of the femur is almost curved at all (lateral view),
- the corpus femoris towards the ends of the bone is getting thicker only to a small extent (cranial view),
- the axis of caput femoris and collum femoris is obtuse-angled to the longitudinal axis of the femur (cranial view),
- the medial crista of trochlea patellaris is only a bit higher than the lateral crista (distal view),
- the cristae of trochlea patellaris are short,
- the sulcus patellaris is shallow.

***Falco naumanni*:**

- the femur is very short, the transverse measurements are relatively higher than in the Red-footed Falcon,
- the crista trochanteris is relatively high, shaped as a curve (lateral view),
- the axis of caput femoris and collum femoris is obtuse-angled to the longitudinal axis of the femur (cranial view),
- the medial crista of trochlea patellaris is only a bit higher than the lateral crista (distal view),
- the cristae of trochlea patellaris are short,
- the sulcus patellaris is shallow.



## Tibiotarsus

As regards to the longitudinal measurements of the tibiotarsus the parameters of Merlin, Hobby and Kestrel are largely overlapping. But if we examine the average values the Kestrel has the longest tibiotarsus among these species. The tibiotarsus of the Merlin is a bit shorter than that of the Hobby's (just opposite the case of the femur), its minimum value in the Merlin is very close to the maximum value of the Red-footed Falcon. In the case of the Hobby and Merlin the difference between the length of the tibiotarsus of the sexes is much larger than in any other bone. The tibiotarsus of the Eleonora's Falcon is relatively short, the only measured specimen's length was equal to the maximum value of the Kestrel's. The tibiotarsus of the Red-footed Falcon and Lesser Kestrel is short, but the Lesser Kestrel's tibiotarsus is only slightly shorter than the Red-footed Falcon's (Plate XXV, Figure 1).

The transverse measurements in the two size groups (Merlin, Hobby and Kestrel in the one group, Red-footed Falcon and Lesser Kestrel in the other) are considerably overlapping, and hence only the ratios are adequate for telling apart the species. In general terms it is characteristic that the absolute transverse measurements of the Hobby are greater than that of the Merlin's. This relation is also true between the Kestrel and Hobby, except the height measurements the distal end of the bone (**DH**), which is greater in the Kestrel. The latter species can be separated from the Hobby and the Merlin if we take into account the ratios calculated with the help of longitudinal and transverse values. As a consequence of the great height values of the distal end of the bone the **PT/DH** and **DW/DH** ratios are also adequate for the identification of the species.

In the Merlin as a consequence of the greater length of the tibiotarsus the **GL/CW** and **GL/CT** ratios are considerably high. The **GL/CT** ratio is also high in the Kestrel, but as the corpus is wide a bit in this species the **CW/CT** ratio is the highest in this case. The corpus width related to the length is shown in the Plate XXV, Figure 2.

In the Red-footed Falcon the transverse measure of the proximal end (**PT**) is greater, but the sizes of the corpus and the distal end of the bone are smaller than in the Lesser Kestrel. The two species is quite well separated according to the **GL/PT** and **PT/DH** ratios.

In the Merlin the corpus tibiotarsi in distal direction from the connection point of the fibula is wider than in the other species. This caused by the more prominent edge as a continuing of the fibula, and hence the corpus is wider. A further characteristic is that consequently the connection of the fibula and the corpus tibiotarsi is smoother and lacks the breaking as compared to the other species.

In the Merlin and Hobby compared to the Kestrel and Lesser Kestrel the crista patellaris is less prominent in the proximal direction. But the crista interna (BALLMANN, 1969), in the two first species is higher in proximal direction, and strongly curved. And hence the height difference between the crista interna and crista patellaris is greater in the Merlin and Hobby than in the Kestrel and Lesser Kestrel (Plate XLII, Figures 13-17).

In the Red-footed Falcon the crista patellaris has got a depression near the proximal end of the crista cnemialis cranialis (proximal from the sulcus intercrystalis), and hence the crista patellaris is waving. In the other species this depression is missing (Plate XLII, Figure 16).

In the Hobby and Merlin the area interarticularis and the facies articularis lateralis (they form a unit) proximally is more protruding than in the Kestrels. And hence the difference measured between the greatest length (**GL**), which includes the crista interna and the length of the tibiotarsus measured in the longitudinal axis is smaller than in the Kestrel and Lesser Kestrel, where the crista interna proximally higher and the area interarticularis is lower. In the Red-footed Falcon the area interarticularis and the facies articularis lateralis is more protruding, and hence this species is intermediate regarding this marker.

The pons supratendineus directed laterally at the cranial side of the distal end of the bone is the widest in the Kestrel and the narrowest in the Red-footed Falcon and Lesser Kestrel.

At the distal end of the bone the most prominent difference among the species is found in the shape and size of the condyli. In the Hobby and Merlin the diameter of the condylus medialis is considerably larger (cranio-caudal direction, **DH** size) than the condylus lateralis, where the cranial part of the condylus is smaller. In the Hobby this difference is 0.4 mm (0.3-0.5 mm) in the Merlin 0.3 mm (0.1-0.5 mm). In the Kestrel and Lesser Kestrel – where the cranial part of the condylus lateralis is larger than in the other species – the difference between the diameters of the condyli is only 0.1 mm (0.0-0.3 mm), but sometimes the diameter of the condylus lateralis is larger than that of the condylus medialis. In the Red-footed Falcon this difference is larger than in the Kestrel and Lesser Kestrel. In average 0.1-0.2 mm but might be as much as 0.3-0.4 mm (Plate XLIII, Figures 1-5).

In the separation of the species the ratio calculated from the diameter of the proximal end of the bone (**PT**) and the cranio-caudal size of the condylus lateralis (**CL**) is very useful. The **PT/CL** value is given for the following species with the average in parenthesis:

<i>Falco subbuteo</i> :	1.70 – 1.87 (1.80)
<i>Falco columbarius</i> :	1.62 – 1.86 (1.73)
<i>Falco tinnunculus</i> :	1.48 – 1.68 (1.59)
<i>Falco vespertinus</i> :	1.53 – 1.77 (1.64)

The shape of the trochlea is also different in the examined species. In the Hobby and the Merlin the arch of the lateral crista sulci is less rounded, and hence connected to the corpus tibiotarsi more gradually than in the Kestrels (lateral view). On the contrary in the case of the Kestrel the arch of the lateral crista sulci is strongly rounded and the trochlea is round shaped in lateral view (Plate XLII, Figures 11-12).

In the case of the Merlin the distal end of the bone is diverging into medial direction compared to the longitudinal axis of the corpus tibiotarsi, and the cranial part of the condylus medialis also bends more into the medial direction than in the rest of the species (caudal view). In the case of the Hobby there is a similar phenomenon, but emphasised to a lesser degree.

### Summary

***Falco subbuteo*:**

- the bone ends of the tibiotarsus are quite big,
  - the crista patellaris is low in proximal direction, at the same time the crista interna is high,
  - the area interarticularis and the facies articularis lateralis in proximal direction is high,
  - the cranial part of the condylus lateralis is small,
  - the arch of lateral crista sulci is flattened,
  - the cranial part of condylus medialis is diverging outwards into medial direction (distal view).
- |   |   |
|---|---|
| } | the diameter of condylus medialis is significantly larger than that of the condylus lateralis (distal view) |
|---|---|

***Falco columbarius*:**

- the corpus tibiotarsi is relatively narrow, but at the distal part (after the connection of the fibula) it becomes wide and flattened,
- the crista patellaris is low in proximal direction, at the same time the crista interna is high,

- the area interarticularis and the facies articularis lateralis in proximal direction is high,
  - the cranial part of the condylus lateralis is small,
  - the arch of lateral crista sulci is flattened,
  - the cranial part of the condylus medialis is diverging outwards into medial direction strongly.
- } the diameter of condylus medialis is significantly larger than that of the condylus lateralis (distal view)

***Falco eleonora*:**

- the tibiotarsus is relatively short, the bone ends are big.

***Falco tinnunculus*:**

- the tibiotarsus is long, the proximal end is relatively small,
  - the crista patellaris is high in proximal direction, at the same time the crista interna is low (cranial view),
  - the corpus tibiotarsi at the distal bone end is a little bit flattened (the CW/CT value is high),
  - the lateral pons supratendineus is wide (distal bone end, cranial side),
  - the distal bone end is high (DH value),
  - the cranial part of the condylus lateralis is large,
  - the arch of lateral crista sulci is strongly rounded,
- } the diameter of condylus medialis is significantly larger than that of the condylus lateralis (distal view)

***Falco vespertinus*:**

- the tibiotarsus is short, the corpus is narrow,
- the proximal end of the bone is relatively large (PT value), and the distal end is small,
- the crista patellaris is waving,
- the crista interna is relatively highest here among the Kestrels,
- the lateral pons supratendineus is narrow (distal bone end, cranial side),
- the cranial part of the condylus lateralis is relatively large, the diameter of condylus medialis and condylus lateralis is approximately equal (distal view).

***Falco naumanni*:**

- the tibiotarsus is short, the corpus is relatively wide,
- the proximal end of the bone is relatively small, and the distal end is large,
- the crista patellaris is high in proximal direction, the crista interna is low,
- the lateral pons supratendineus is narrow (distal bone end, cranial side),
- the cranial part of the condylus lateralis is large, the diameter of condylus medialis and condylus lateralis is approximately equal (distal view).

### Tarsometatarsus

The Hobby has comparatively short tarsometatarsus, while the Kestrel has markedly long one, the difference is so striking that the length measures of the two species do not overlap at all. The quite long tarsometatarsus of the Merlin on the other hand do overlap with both of the above mentioned species, the measures of the males overlap with the Hobby, while that of the females overlap with the Kestrel. The very short tarsometatarsus of the Red-footed Falcon and Lesser Kestrel is clearly separated without overlapping from the measures of all the other species. Among the latter two species the tarsometatarsus – in contrast to the formerly discussed bones – of the Lesser Kestrel is longer (Plate XXVII, Figure 1).

Most of the diameter measures in the case of Hobby, Merlin and Kestrel are more or less

within the same range, but the width of corpus tarsometatarsi (**CW**) in the case of Kestrel is markedly larger compared to the other two species (Plate XXVII, Figure 2). In the case of the Merlin males the transverse measure of the distal end of the bone (**DT**) is quite small (for example it is separated without overlapping from the Hobby), but it is not true for the females. In the case of the Red-footed Falcon and Lesser Kestrel the diameters are also similar, only the size of the distal end of the bone (**DW**, **DT**) are different. These are larger in the case of the Red-footed Falcon than in the Lesser Kestrel.

As a consequence of the described differences the Hobby is quite well separated from the Merlin and Kestrel on the basis of **GL/PW** and **GL/DW** ratio values, as the tarsometatarsus of the Hobby is relatively short and the bone ends are quite large. The contrary is true for the Kestrel, and hence these ratio values are the highest in this species (Plate XXVI, Figure 2).

The corpus tarsometatarsi – relative to its length- is the narrowest in the Merlin (the **GL/CW** value is high). In the Kestrel on the other hand although the width of the corpus is larger, but this ratio value is not lower as the tarsometatarsus is long. Therefore it is better if we compare the width of the corpus to the width of the proximal end of the bone in this species. This **PW/CW** value is considerably lower in the case of the Kestrel than in the Hobby and Merlin.

The distal end of the bone is considerably larger in the Red-footed Falcon than in the Lesser Kestrel, and hence the two species can be easily separated by the **GL/DW** and **PW/DW** ratios. The width of the corpus tarsometatarsi is approximately equal in the two species.

The height measure of crista medialis hypotarsi comparative to the length of tarsometatarsus – as a consequence of the shortness of tarsometatarsus – is the highest in the case of the Red-footed Falcon and Lesser Kestrel (**GL/HH** value is the lowest). The next is the Hobby, which is safely separated by this ratio value from the Merlin. The **GL/HH** value is highest in the Kestrel.

Morphological characteristics: in the Hobby and Merlin at the proximal end of the bone the cotyla medialis is deeper, and its margin is less elevated on the plantar side, at the same time the cotyla lateralis is higher (more elevated in proximal direction) than in the Kestrel, Red-footed Falcon and Lesser Kestrel. And hence the plane formed by the articular surfaces are not perpendicular to the longitudinal axis in dorsal view in the Hobby and Merlin, while in the Kestrels it is perpendicular (Plate XLIII, Figures 6-10).

In the Merlin the medial edge of cotyla medialis is bigger, in proximo-lateral direction it is protruding stronger than in the Hobby (Plate XLIII, Figures 6-7).

In the Red-footed Falcon the eminentia intercondylaris is bigger than in the other species (Plate XLIII, Figure 9).

In the Hobby the tarsometatarsus in the line of tuberositas musculi tibialis cranialis is wider, compared to the other species. In the Kestrel some individuals show similar features, but to a smaller extent (Plate XLIII, Figures 6-10).

The tuberositas musculi tibialis cranialis in the Merlin is smaller than in the rest of the species.

The shape of the hypotarsus also differs in the different species. In the Hobby and Red-footed Falcon the proximal edge of crista medialis hypotarsi in medial view is perpendicular to the longitudinal axis, or bends upwards in proximal direction only a little bit, while in the Merlin and Kestrel this edge getting near to the apex of hypotarsus bends in proximal direction. In the Lesser Kestrel both of these forms can be found (Plate XLIII, Figures 15-19).

In plantar view the plate on the proximal section of the plantar side of crista medialis hypotarsi is wide in the Hobby, rounded at the apex and the widest at this part. In the Merlin this plate is the widest at the section prior to the apex, and narrows down and becomes pointed at the tip. The plantar plate of the crista medialis hypotarsi is quite wide in both of the species.

In the Kestrel this plate is generally narrower, widest at the section prior the apex, and narrows towards the apex. In the Red-footed Falcon and Lesser Kestrel the shape of the plantar plate of the crista of the hypotarsus is most similar to that of the Merlin, but narrows to a smaller extent towards the apex (Plate XLIII, Figures 6-10).

The edge at dorso-lateralis margin of corpus tarsometatarsi in the Merlin – and to a smaller extent in the Kestrel – is protruding like a rib, in the Hobby, Red-footed Falcon and Lesser Kestrel does not protrude at all.

In the Kestrel the trochlea metatarsi III is relatively smaller, and extends less forward in distal direction (the os metatarsale III is shorter) than in the rest of the species. But the trochlea metatarsi IV is placed more forward in distal direction, and hence the arch connecting the ends of the trochleae is the most flattened (Plate XLI, Figure 19). An another characteristic of the Kestrel is that as the trochlea metatarsi IV is placed more forward the distance difference between the ends of trochlea metatarsi II and tr. met. IV is less, and hence the line connecting the two trochleae is forming a larger degree with the longitudinal axis of the tarsometatarsus (it is nearer to the right angle) than in the rest of the species. We find the greatest length difference in the Red-footed Falcon and Lesser Kestrel between the distal edges of trochlea metatarsi II and tr. met. IV. The trochlea metatarsi II in distal direction is reaching more forward, and the tr. met. IV is located more backwards than in the rest of the species. And hence the line connecting the distal edges of the two trochleae meets the longitudinal axis of the tarsometatarsus in the sharpest angle (Plate XLI, Figures 17-20).

In the Hobby and Merlin the location of the trochleae is not different, in both of the species the trochlea metatarsi IV is located more backwards proximally (Plate XLI, Figures 17-18).

In the Hobby all of the three trochleae, and in the Red-footed Falcon the trochlea metatarsi III is relatively larger than in the rest of the species (Plate XLIII, Figures 11-14).

### Summary

#### ***Falco subbuteo:***

- the tarsometatarsus is relatively short, the ends of the bones are great (**PW, DW**),
- the plane of the proximal end of the bone is not perpendicular to the longitudinal axis (dorsal view),
- the corpus tarsometatarsi on the proximal part is wide (dorsal view),
- the crista medialis hypotarsi at the apex is more rounded (medial view), the plate at the plantar edge is wide, widens towards the apex, and rounded at the end (plantar view),
- the trochleae are the biggest in this species.

#### ***Falco columbarius:***

- the tarsometatarsus is long, the corpus is relatively thin (**GL/CW** value is high),
- the plane of the proximal end of the bone is not perpendicular to the longitudinal axis (dorsal view),
- the medial edge of cotyla medialis is high,
- the tuberositas musculi tibialis cranialis is small,
- the crista medialis hypotarsi on the part at the tip is more pointed (medial view), the plate at the plantar edge is wide, narrows towards the apex (plantar view),
- on the dorso-lateral margin of corpus tarsometatarsi there is a rib-like edge.

#### ***Falco tinnunculus:***

- the tarsometatarsus is especially long, the corpus is wide,
- the proximal end of the bone is relatively narrow (**PW**),

- the plane of the proximal end of the bone is perpendicular to the longitudinal axis (dorsal view),
- the apex part of crista medialis hypotarsi is more pointed (medial view), the plate at the plantar edge is narrower, narrows towards the apex (plantar view),
- on the dorso-lateral margin of corpus tarsometatarsi there is a rib-like edge,
- the distance difference between the distal edges of the trochleae is small,
- the trochlea metatarsi III is relatively small.

***Falco vespertinus:***

- the tarsometatarsus is especially short,
- the distal end of the bone is relatively large (**GL/DW**, **PW/DW** values are low),
- the plane of the proximal end of the bone is perpendicular to the longitudinal axis (dorsal view),
- the eminentia intercondylaris is large,
- the tip of crista medialis hypotarsi is more rounded (medial view), the plate at the plantar edge narrows towards the apex only very slightly (plantar view),
- the length difference between the distal edge of the trochlea metatarsi II and IV is considerable (dorsal view),
- the trochlea metatarsi III is relatively large.

***Falco naumanni:***

- the tarsometatarsus is especially short,
- the distal end of the bone is small (**GL/DW**, **PW/DW** values are high),
- the plate at the plantar edge of crista medialis hypotarsi narrows towards the apex only very slightly (plantar view),
- the length difference between the distal edge of the trochlea metatarsi II and IV is considerable (dorsal view).

## ***The digits of the foot (ossa digitorum pedis)***

### ***1st toe***

#### **Phalanx 1 digiti I posterior**

The length of the phalanx 1 dig. 1 post. in the Hobby, Merlin and Kestrel approximately equal, but separated without overlap from the Red-footed Falcon and Lesser Kestrel, in which the phalanx is much smaller than in the former species.

The width of corpus phalangis (**CW**) is greater in the Kestrels than in the true Falcons. The Merlin has got the narrowest phalanges, even narrower than the Hobby (Plate XXVIII, Figure 1).

In the Hobby and Merlin at the proximal end of the bone the tuberculum collaterale laterale is larger, and the dorsal side of the end of the bone is more protruding (the tuberculum extensorium is greater) than in the Kestrels (Plate XLIV, Figures 1-4).

In the Kestrels the plantar side of corpus phalangis is more flattened and wider, than in the Hobby and Merlin.

In the Hobby and Merlin in lateral view on the plantar side of the corpus there is a protrusion. From here in distal direction the phalanx is strongly narrowing, and becomes narrowest before the capitulum phalangis. The cristae plantares mediales et laterales are missing at this section, the plantar side is rounded. In the case of the Red-footed Falcon and Lesser Kestrel we find similar structures, but to a lesser extent. In the Kestrel there is no protrusion on the plantar side of the corpus, and the phalanx is hardly narrowing in distal direction. The cristae plantares med. et lat. are present, the plantar side is flat, and even concave (Plate XLIV, Figures 6-10).

In the Kestrels the distal part of corpus phalangis (proximally from the capitulum phalangis) is strongly bending into plantar direction, most pronouncedly so in the Kestrel. In the Hobby and Merlin this arch is much less pronounced (Plate XLIV, Figures 6-10).

The dorso-distal edge of condylus medialis and cond. lateralis in the Hobby is protruding, the capitulum phalangis in lateral view is a bit pointed. This characteristic is less pronounced in the Merlin, and in the Kestrel is hardly visible. In the Red-footed Falcon and Lesser Kestrel the capitulum phalangis in lateral view is arch shaped, and smaller in size than in the former species (Plate XLIV, Figures 6-10).

The concave parts at the two sides of the capitulum phalangis – the depressio epicondylaris medialis and lateralis – is deeper in the Kestrels than in the other species, and deepest in the Kestrel.

The socket of trochlea phalangis – the sulcus intercondylaris – the deepest in the Hobby, and narrow, in the Merlin it is also deep, but wider. In the Kestrels the sulcus intercondylaris is shallower, especially in the Red-footed Falcon, in the Kestrel the socket is extremely wide (Plate XLIV, Figures 1-5).

### Summary

#### ***Falco subbuteo:***

- the corpus phalangis is narrow,
- the tuberculum collaterale laterale is big,
- the proximal end of the bone on the dorsal side is protruding, the tuberculum extensorium is big,
- on the distal part of the corpus the cristae plantares med. et lat. are missing, the plantar side on this section is rounded, the corpus in lateral view is narrowing,
- the distal section of corpus in lateral view is only a little bit bending,
- the dorso-distal edge of condyli is becoming only slightly pointed (lateral view),
- the depressio epicondylaris lateralis and medialis are shallow,
- the sulcus intercondylaris is very deep, and narrow (dorsal view).

#### ***Falco columbarius:***

- the corpus phalangis is narrow,
- the tuberculum collaterale laterale is large,
- the proximal end of the bone on the dorsal side is protruding, the tuberculum extensorium is large,
- on the distal part of the corpus the crista plantaris medialis and lateralis are missing, the plantar side is rounded, and the corpus in lateral view is narrowing,
- in lateral view the distal part of the corpus is only slightly bending,
- the dorso-distal edge of condyli becomes slightly pointed (lateral view),
- the depressio epicondylaris lateralis and medialis are shallow,
- the sulcus intercondylaris is deep.

#### ***Falco tinnunculus:***

- the corpus phalangis is wide,
- the tuberculum collaterale laterale and tuberculum extensorium are small,
- the crista plantaris medialis and lateralis are present at the distal part of the corpus too, the plantar side is wide, and on the distal section is also flat, or concave,
- on the plantar side of the corpus there is no protrusion, the phalanx only slightly narrowing in distal direction (lateral view),
- the distal part of the corpus in lateral view is very strongly bending,
- the depressio epicondylaris lateralis and medialis are very deep,
- the sulcus intercondylaris is shallow and wide.

*Falco vespertinus:*

- the phalanx is short, the corpus phalangis is comparatively wide,
- the tuberculum collaterale laterale and the tuberculum extensorium are small,
- the plantar side of the corpus is wide, and flat,
- the distal part of the corpus in lateral view is strongly bending,
- the capitulum phalangis in lateral view is arch shaped,
- the depressio epicondylaris medialis and lateralis are relatively deep,
- the sulcus intercondylaris is very shallow.

*Falco naumanni:*

- the phalanx is short, the corpus phalangis is wide,
- the tuberculum collaterale laterale and tuberculum extensorium are small,
- the plantar side of the corpus is wide and flat,
- the distal part of the corpus in lateral view is strongly bending,
- the capitulum phalangis in lateral view is arch shaped.

### Phalanx 2 digiti 1 posterior

The talon of the first phalanx is the longest in the Kestrel, but that of the Merlin is also longer than that of the Hobby. And consequently in the Kestrel and Merlin the height of the proximal end of the bone relative to the length of the talon is smaller (**GL/PH** value is higher) than in the Hobby, Red-footed Falcon and Lesser Kestrel.

The ratio of the height and width of the proximal end of the bone (**PH/PW**) is the highest in the Merlin and Hobby, while in the Red-footed Falcon and Lesser Kestrel is lower. The **PH/PW** ratio is lowest in the Kestrel. The reason of this phenomenon is partly the fact that in the Kestrel on the two sides of the proximal end of the bone on the section between the cotyla articularis and tuberculum flexorium major (from the foramina vascularia laterally and medially) the bone rim bending over the horn cover of the talon is wider and thicker than in the other species, and hence increases the width of the proximal end of the bone (**PW**). This bone rim is the narrowest (proximo-distal direction) and the bones at the two sides are the most narrowly arched (proximal view) in the Red-footed Falcon and Lesser Kestrel, and hence the end of the bone is narrower in these species (**PH/PW** values are comparatively high).

In the Kestrel and Red-footed Falcon the corpus phalangis is higher and wider (the talon is thicker), than in the Hobby, Merlin and Lesser Kestrel (Plate XXVIII, Figure 2).

In the Hobby and Merlin in lateral view the end of tuberculum extensorium is wider and more knobby than in the Kestrels. In the Red-footed Falcon and Lesser Kestrel this part is even shorter than in the other species (Plate XLIV, Figures 11-15).

The talon of the first (and 2nd) toe of the Red-footed Falcon and Lesser Kestrel can not be mixed with that of the other species as a consequence of their size, but can be misidentified as the talon of the fourth toe of those species. But from the Kestrel they can be separated on the basis of the ratio of the height and width of the proximal end of the bone, and furthermore by the size of the rims of the bone. The talon of the fourth toe of Hobby and Merlin differs from the talons of the first and second toes of Red-footed Falcon and Lesser Kestrel in the length of the tuberculum extensorium.

### Summary

*Falco subbuteo:*

- the proximal end of the bone is high, narrow,
- the tuberculum extensorium is long, and its end in lateral view is knobby.



***Falco columbarius:***

- the proximal end of the bone is narrow,
- the tuberculum extensorium is long, and its end in lateral view is knobby.

***Falco tinnunculus:***

- the talon is large, the corpus phalangis is thick (wide and high),
- the proximal end of the bone is high and wide,
- the plantaro-lateral rim of the bone is wide and thick,
- the end of tuberculum extensorium in lateral view is thinner.

***Falco vespertinus:***

- the talon is small, but the corpus phalangis is relatively thick,
- the plantaro-lateral rim of the bone is narrow and thin,
- the proximal end of the bone is wide, the tuberculum extensorium is shorter and more pointed.

***Falco naumanni:***

- the talon is small, the corpus phalangis is narrower,
- the plantaro-lateral rim of the bone is narrow and thin,
- the proximal end of the bone is wide, the tuberculum extensorium is shorter and more pointed.

## 2nd toe

### Phalanx 1 digiti 2 posterior

The phalanx 1 dig. 2 post. is longest and comparatively thin in the Hobby, in the Kestrel on the contrary, it is extremely short and thick. This phalanx of the Kestrel is just slightly longer than that of the Red-footed Falcon's. And hence based on their length the phalanges can be only separated very scarcely, but the sexes can be differentiated in the Hobby and Merlin (Plate XXIX, Figure 1).

The ratio of the length of the phalanx and the width of the corpus phalangis (**GL/CW**) does separate the Hobby and Kestrel from the rest of the species. In the former this ratio is high, while in the latter species this is low. The phalanx of the Merlin can be separated from the Red-footed Falcon and Lesser Kestrel better on the basis of the absolute length, although there is some overlap among them (Plate XXIX, Figure 2).

In the Hobby the proximal end of the bone is higher than in the Merlin (the tuberculum extensorium is greater), and in both species higher and narrower than in the Kestrels (proximal view). The proximal end of the bone is the most flattened and wide in the Kestrel (Plate XLIV, Figures 25-28).

In the Hobby and Merlin the longitudinal crista dorsalis medialis – located near to the proximal end of the bone – is bigger, and extends higher than in the Kestrels. On the other hand the crista dorsalis lateralis is smaller, located deeper, and sometimes hardly visible. In the Kestrels the cr. dors. medialis is sometimes sharp, but short. The cr. dors. lateralis is most elevated and pronounced in the Red-footed Falcon, even higher than in the Kestrel.

In the Hobby and Merlin the condylus lateralis extends more in distal direction, than the condylus medialis, in the Kestrels these are more or less aligned. This characteristic is even more pronounced in the Hobby than in the Merlin (Plate XLIV, Figures 25-28). Furthermore in the first two species the condylus lateralis bends outwards into lateral direction more than in the Kestrels. This is more pronounced in the Merlin.

The capitulum phalangis is highest in dorso-plantar direction in the Kestrel, and still higher in the Hobby than in the Merlin. The capitulum is lowest in the Red-footed Falcon. The

condylus medialis is most arch shaped in the Red-footed Falcon and Merlin, (medial view, Plate XLIV, Figures 22-24) and the plantar edge of condylus lateralis is less pointed than in the Kestrel and Hobby (lateral view).

The diameter of the condylus medialis and cond. lateralis is most different in the Hobby and Merlin, while the least different in the Kestrel (distal view).

### Summary

#### ***Falco subbuteo:***

- the phalanx is long and thin,
- the proximal end of the bone is very high, the dorsal side has a protrusion, the tuberculum extensorium is great,
- the crista dorsalis medialis is great, high, the cr. dors. lateralis is small, hardly visible,
- the condylus lateralis extends more in distal direction, than the cond. medialis, and bends outwards in lateral direction,
- the capitulum phalangis is high in dorso-plantar direction,
- the diameter of the condylus medialis and cond. lateralis differs considerably (distal view).

#### ***Falco columbarius:***

- the proximal end of the bone is high,
- the crista dorsalis medialis is great, high, the cr. dors. lateralis is small, hardly visible,
- the condylus lateralis extends more in distal direction, than the cond. medialis, and bends outwards in lateral direction (dorsal and distal view),
- the capitulum phalangis is low in dorso-plantar direction (medial view),
- the diameter of the condylus medialis and cond. lateralis differs considerably (distal view).

#### ***Falco tinnunculus:***

- the phalanx is short and thick,
- the proximal end of the bone is wide and flat (proximal view),
- the crista dorsalis medialis is smaller, short, the cr. dors. lateralis is higher,
- the condylus medialis and cond. lateralis are located in one line, or the cond. lateralis extends slightly further (dorsal view),
- the capitulum phalangis is large, and the highest in this species in dorso-plantar direction (medial view),
- the difference between the diameters of the condylus medialis and cond. lateralis is small (distal view).

#### ***Falco vespertinus:***

- the phalanx is short and relatively thick,
- the proximal end of the bone is wide and flat (proximal view),
- the crista dorsalis medialis is smaller, short, the cr. dors. lateralis is highest in this species,
- the condylus medialis and cond. lateralis are located in one line, (dorsal view),
- the capitulum phalangis is small, and arch shaped (lateral view).

#### ***Falco naumanni:***

- the phalanx is sort, slightly thicker than in the Red-footed Falcon,
- the articular surface of the proximal end of the bone is wide and flat (proximal view),
- the capitulum phalangis is small, and arch shaped (medial view),
- the difference between the diameters of the condylus medialis and cond. lateralis is small (distal view).

## Phalanx 2 digiti 2 posterior

The phalanx 2 dig. 2 post. has approximately equal length in the Hobby, Merlin and in the Kestrel. The phalanx of the Red-footed Falcon and Lesser Kestrel is considerably smaller, and differs from the former species so much that there is no overlap between them (Plate XXIX, Figure 1).

Compared to its length the corpus phalangis is the thinnest in the Hobby, and the thickest in the Kestrel. The other species are in intermediary position between these extremes, but the phalanx of the Merlin is in average (relative value) thinner than that of the Red-footed Falcon and Lesser Kestrel (Plate XXX, Figure 1).

The width of the proximal end of the bone proportional to its length ( $GL/PW$ ) is smallest in the Hobby, and then in the Merlin.

In dorsal view the corpus phalangis of the Hobby narrows a little bit on the distal part, but equally wide in the Merlin (Plate XLIV, Figures 16-17).

The sulcus intercondylaris in the Hobby is deeper than in the Merlin, and shallowest in the Red-footed Falcon and Lesser Kestrel (Plate XLIV, Figures 16-19).

The corpus phalangis in lateral view is more curved in the Kestrels than in the Hobby and Merlin. This is more prominent if viewed in the dorsal contour line (Plate XLIV, Figures 20-21).

In the Red-footed Falcon the corpus phalangis widens gradually in proximal direction (dorsal view), while in the other species the lateral and medial contour lines are approximately parallel, or occasionally gets wider slightly in the Kestrel (Plate XLIV, Figures 16-19).

In the Kestrel the medial edge of tuberculum extensorium is tilted, while in the Hobby and Merlin is parallel with the longitudinal axis, and hence the tuberculum extensorium in dorsal view is more rectangular. In the Red-footed Falcon and Lesser Kestrel this inclination is minimal, though visible.

The proximal part of facies plantaris of corpus phalangis in the Kestrel and Lesser Kestrel is more rounded than in the rest of the species. The reason is that the crista plantaris medialis and cr. plant. lateralis are higher in these species than in the others. Furthermore as a consequence of that the higher cristae in the Kestrel and Lesser Kestrel the corpus phalangis in lateral view widen stronger in proximal direction than in the other species. This widening is already weaker in the Red-footed Falcon, in the Merlin and Hobby the corpus basically is constantly sized, only widens right prior the proximal end of the bone.

In the Hobby and Merlin in lateral view the corpus phalangis narrows down on the distal section (Plate XLIV, Figures 20-21). The reason of this phenomenon is that the crista plantaris medialis and cr. plant. lateralis are missing on this section. In the Kestrel and Lesser Kestrel this narrowing is almost invisible, and in the Red-footed Falcon it is very slight.

The dorso-distal edges of condylus lateralis and cond. medialis are protruding in the Hobby and Merlin, and hence on this part the capitulum phalangis is a bit pointed in lateral view. Consequently the dorsal side of capitulum phalangis is either straight or concave in lateral view. In the other species this pointedness is less pronounced (the dorsal side of the capitulum is rounded), or completely missing. In the latter case the capitulum phalangis in lateral view is more or less arch shaped, for example in the Red-footed Falcon and Lesser Kestrel (Plate XLIV, Figures 20-21).

### Summary

#### ***Falco subbuteo:***

- the phalanx is thin, the corpus phalangis on the distal section slightly narrows down (dorsal view),
- the tuberculum extensorium is quadrangle, its sides are parallel (dorsal view),

- the corpus phalangis in lateral view either not or only very slightly becomes thicker in proximal direction,
- the crista plantaris medialis and cr. plant. lateralis on the distal part of the corpus are missing, and hence the corpus in lateral view tapers off here,
- the sulcus intercondylaris is deep (dorsal view),
- the dorso-distal edge of the condyli is elevated, the capitulum phalangis has got a protrusion (lateral view),
- the dorsal side of capitulum phalangis in lateral view is either straight or concave.

***Falco columbarius:***

- the width of corpus phalangis is constant longitudinally, and slightly thicker than that of the Hobby (dorsal view),
- the tuberculum extensorium in dorsal view is quadrangle, its sides are parallel,
- the corpus phalangis in lateral view either not or only very slightly becomes thicker in proximal direction,
- the crista plantaris medialis and cr. plant. lateralis on the distal part of the corpus are missing, and hence the corpus in lateral view tapers off here,
- the sulcus intercondylaris is less deep (dorsal view),
- the dorso-distal edge of the condyli is elevated, the capitulum phalangis has got a protrusion (lateral view),
- the dorsal side of capitulum phalangis in lateral view is either straight or concave.

***Falco tinnunculus:***

- the phalanx is thick,
- the dorsal edge of corpus phalangis in lateral view is strongly curved, especially so on the distal section,
- the medial edge of the tuberculum extensorium is tilted (dorsal view),
- the proximo-plantar part of corpus phalangis is strongly rounded,
- the corpus phalangis in lateral view is getting strongly thicker in proximal direction,
- the corpus phalangis on the distal part in lateral view is becoming only slightly or not at all thinner, the crista plantaris medialis and cr. plant. lateralis are on this part present, too,
- the dorso-distal edge of the condyli is only slightly pointed, (lateral view),
- the dorsal side of capitulum phalangis in lateral view is convex.

***Falco vespertinus:***

- the phalanx is short,
- the corpus phalangis into proximal direction is getting constantly thicker in dorsal view, in lateral view it is becoming only slightly thicker,
- the sulcus intercondylaris is shallow (dorsal view),
- the capitulum phalangis in lateral view is arch shaped, its dorso distal edge is becoming only slightly or not at all pointed.

***Falco naumanni:***

- the phalanx is short,
- the corpus phalangis on the proximo-plantar part is strongly hollow,
- the corpus phalangis in lateral view is getting strongly thicker in proximal direction,
- the sulcus intercondylaris is shallow (dorsal view),
- the capitulum phalangis in lateral view is arch shaped, its dorso distal edge does not become pointed.

### Phalanx 3 digiti 2 posterior

For the phalanx 3 dig. 2 post. all the characteristics described at ph. 2 dig. 1 post. is relevant (Plate XXX, Figure 2).

## *3d toe*

### Phalanx 1 digiti 3 posterior

The phalanx 1 dig. 3 post. in the Kestrel is considerably shorter than in the Merlin and Hobby, inasmuch that this species can be safely (the overlap is minimal) separated from the other two on the basis of the length of the phalanx. The length of the phalanx of the Kestrel shows a greater overlap with that of the Red-footed Falcon, and that of the Lesser Kestrel coincides with the length of the Red-footed Falcon (Plate XXXI, Figure 1).

The corpus phalangis – compared to the length of the phalanx – is narrowest in the Hobby, in the Merlin a bit wider, then follows the Red-footed Falcon and Lesser Kestrel. The corpus is widest (**GL/CW** value is lowest) in the Kestrel. The same order is found in the width of the proximal end of the bone as compared to the length (Plate XXXII, Figure 1).

In the Hobby and Merlin the dorsal edge of the proximal end of the bone is more protruding (the tuberculum extensorium is bigger), and hence the end of the bone is higher than in the Kestrels (Plate XLV, Figures 1-4).

The tuberculum collaterale mediale and tub. collat. laterale in the Kestrels are bigger than in the Merlin and Hobby, mainly elevated strongly on the plantar side (proximal view). The tuberculum collaterale mediale and laterale are the greatest in the Kestrel, and hence the hollow is deepest in this species on the plantar side of the proximal end of the bone. Furthermore in the Kestrel the crista plantaris medialis and lateralis are long in distal direction. In the Hobby and Merlin the hollow is shallower on the plantar side, and the crista plantaris medialis and lateralis are long (the medial crista is slightly longer than the lateral one) but less high than in the Kestrel. In the Red-footed Falcon and Lesser Kestrel the proximo-plantar hollow is small in extent, and the cristae plantares are shorter than in the other species.

In the Hobby and Merlin the plantar edge of condylus lateralis a bit protruding outwards in lateral direction, in the Kestrels this is not so (or in the Red-footed Falcon only to a very small extent) (Plate XLV, Figures 1-4).

In the Kestrel the capitulum phalangis is narrower, the sulcus intercondylaris is less wide and deeper, and at the same time in lateral view the capitulum is considerably higher than in the Hobby and Merlin (Plate XLV, Figures 1-3 and 5-6).

The condylus lateralis and cond. medialis on the plantar side are connected on a longer section to the corpus in the Kestrel than in the rest of the species (lateral view) (Plate XLV, Figures 5-8).

In the Red-footed Falcon and Lesser Kestrel the capitulum phalangis is considerably smaller, the sulcus intercondylaris is wider and shallower than in the Kestrel (Plate XLV, Figures 6-8 and 3-4)

The depressio epicondylaris medialis and lateralis in the Kestrel are the deepest, and shallowest in the Merlin.

### Summary

#### *Falco subbuteo:*

- the phalanx is especially long,

- the dorsal side of the proximal end of the bone has got a protrusion, the end of the bone is high (proximal view),
- the tubercula collateralia in plantar direction are elevated only a little bit, the proximo-plantar hollow is smaller, the crista plantaris medialis and lateralis are long but low,
- the plantar edge of condylus lateralis is bending outwards in lateral direction (distal view).

***Falco columbarius:***

- the phalanx is long,
- the dorsal side of the proximal end of the bone has got a protrusion, the end is high (proximal view),
- the tubercula collateralia in plantar direction are elevated only a little bit, the proximo-plantar hollow is smaller, the crista plantaris medialis and lateralis are long but low,
- the plantar edge of condylus lateralis is bending outwards in lateral direction (distal view),
- the depressio epicondylaris medialis and lateralis are shallow.

***Falco tinnunculus:***

- the phalanx is comparatively short and thick,
- the tubercula collateralia in plantar direction are elevated strongly, the proximo-plantar hollow is greater and deep, the crista plantaris medialis and lateralis are long and high,
- the capitulum phalangis is narrow and high,
- the condyli of the capitulum phalangis on the plantar side are connecting to the corpus on a long section (lateral view),
- the depressio epicondylaris medialis and lateralis are deep,
- the sulcus intercondylaris is narrow and deep.

***Falco vespertinus:***

- the phalanx is short, thin,
- the proximo-plantar hollow is small in extent, the crista plantaris medialis and lateralis are short,
- the capitulum phalangis is small but high (lateral view),
- the sulcus intercondylaris is wide and shallow (dorsal view).

***Falco naumanni:***

- the phalanx is short,
- the proximo-plantar hollow is small in extent, the crista plantaris medialis and lateralis are short,
- the capitulum phalangis is small but high (lateral view),
- the sulcus intercondylaris is wide and shallow.

### **Phalanx 2 digiti 3 posterior**

The phalanx 2 dig. 3 post. in the Hobby is especially long, and thin. In the Merlin a bit shorter, the two species can usually be separated on the basis of the length of the phalanx. The phalanx of the Kestrel is considerably shorter, its size does not overlap with that of the former species. It is so short that usually only 0.6-0.7 mm longer than the phalanx of the Red-footed Falcon. The phalanx of the Lesser Kestrel is even shorter than that of the Red-footed Falcon's (Plate XXXI, Figure 1).

The corpus phalangis – compared to its length – is narrowest in the Hobby, a bit thicker in the Merlin, and thickest in the Lesser Kestrel (Plate XLV, Figures 9-13). The **GL/CW** ratio safely

separates the Merlin and Hobby from each other and from the Kestrels, and more or less the Red-footed Falcon and Lesser Kestrel is also separated from each other (Plate XXXII, Figure 2).

The crista plantaris medialis and lateralis are only present on the proximal part of the phalanx. These are considerably longer and higher in the Merlin than in the Hobby, and hence the phalanx in lateral view gets thicker stronger in the former than in the latter. These cristae in the Kestrels corresponding to the shorter phalanges are a lot shorter, but are still present, and hence in lateral view the phalanx gets the widest in proximal direction in these species (Plate XLV, Figures 16-18). The hollow between the cristae is shallower in the Red-footed Falcon than in the Kestrel.

On the dorsal side of the capitulum phalngis between the condyli there is a tuberculum. This tuberculum intercondylare dorsale is greatest in the Hobby, almost as big in the Merlin. In the Red-footed Falcon it is small, but still visible, and in the Kestrel it is usually completely missing (Plate XLV, Figures 16-18).

In the Kestrel the diameter of the capitulum phalngis is greater than in the other species, and its dorsal edge in lateral view extends well above the dorsal line of corpus phalngis (in the other species it is not so) (Plate XLV, Figures 16-18).

In the Red-footed Falcon the edges of the condylus lateralis and cond. medialis are sharper than in the Kestrel.

### Summary

#### ***Falco subbuteo:***

- the phalanx is especially long and relatively thin,
- the crista plantaris medialis and lateralis are shorter and lower,
- the tuberculum intercondylare dorsale is the largest in this species,
- the dorsal edge of capitulum phalngis is not elevated above the dorsal line of the corpus (lateral view).

#### ***Falco columbarius:***

- the phalanx is long and relatively thin,
- the crista plantaris medialis and lateralis are high,
- the tuberculum intercondylare dorsale is smaller, but well visible,
- the dorsal edge of capitulum phalngis is not elevated above the dorsal line of the corpus (lateral view).

#### ***Falco tinnunculus:***

- the phalanx is relatively short and thick,
- the ends of the bone (especially the capitulum phalngis) are large sized,
- the tuberculum intercondylare dorsale is missing,
- the dorsal edge of capitulum phalngis is elevated well above the dorsal line of the corpus (lateral view).

#### ***Falco vespertinus:***

- the phalanx is short,
- the ends of the bone are smaller, especially so the capitulum phalngis,
- the edges of condylus lateralis and medialis are sharp,
- the tuberculum intercondylare dorsale is almost invisible,
- the dorsal edge of capitulum phalngis is not elevated above the dorsal line of the corpus (lateral view).

#### ***Falco naumanni:***

- the phalanx is very short, and relatively thick,
- the capitulum phalngis is smaller.

### Phalanx 3 digiti 3 posterior

For the phalanx 3 dig. 3 post. (Plate XXXI, Figure 1; Plate XLV, Figures 19–22) the same is relevant as for the phalanx 2 dig. 2 post., but in this case the ratio constituted from the width of bone ends (**PW/DW**) is a good key too. This value is the higher in the Hobby, while the lowest in the Lesser Kestrel and the Kestrel.

### Phalanx 4 digiti 3 posterior

The length of phalanx 4 dig. 3 of Hobby, Merlin and Kestrel is more or less equal, and considerably shorter in the Red-footed Falcon and Lesser Kestrel.

In the Hobby and Merlin compared to the its height the proximal end of the bone is narrower (the **PH/PW** value is higher) than in the Kestrels. The end of the bone is widest in the Lesser Kestrel and Kestrel.

In the case of this phalanx on the medial side of the corpus phalangis there is a longitudinal crest (referred to as crista medialis). The crista medialis is considerably higher in the Kestrels than in the true Falcons.

In the Hobby and Merlin in lateral view the tuberculum extensorium is thicker, and its end is more club shaped than in the Kestrels. In the Red-footed Falcon this tuberculum is not only thinner but also shorter.

On the plantaro-lateral side of the proximal end of the bone the back-bending bone-rim on the section between the cotyla articularis and tuberculum flexorium major is the widest and thickest in the Kestrel, and still quite big in the Hobby and Merlin. But in the Red-footed Falcon the back-bending is either very slight or completely missing. The back-bending bone-rim on the plantaro-medial side is always considerably smaller and thinner than on the lateral side in all the species, in the Red-footed Falcon this is also completely missing.

### Summary

#### ***Falco subbuteo:***

- the proximal end of the bone is high and thin,
- the tuberculum extensorium in lateral view is thick and its end is knobby,
- the crista medialis is small.

#### ***Falco columbarius:***

- the proximal end of the bone is thin,
- the tuberculum extensorium in lateral view is thicker and its end is knobby,
- the crista medialis is small.

#### ***Falco tinnunculus:***

- the talon is big, the proximal end of the bone is wide,
- the tuberculum extensorium in lateral view is thin,
- the plantaro-lateral bone-rim is thick,
- the crista medialis is big, and strongly elevated.

#### ***Falco vespertinus:***

- the talon is small, the proximal end of the bone is wide,
- the tuberculum extensorium is short, in lateral view it is thin,
- the plantaro-lateral bone-rim is very thin or missing,
- the crista medialis is big, and strongly elevated.



*Falco naumanni:*

- the talon is small, the proximal end of the bone is wide,
- the tuberculum extensorium is thin in lateral view,
- the crista medialis is big, and strongly elevated.

## 4th toe

### Phalanx I. digiti 4 posterior

The phalanx 1 dig. 4 post. is longest in the Hobby, a bit shorter in the Merlin. Compared to its length in both species the phalanx is thin, and hence the **GL/CW** ratios are high. The phalanx of the Kestrel is considerably shorter and thicker, and hence from the former species can be separated with the help of the ratio value. In average the phalanx of the Red-footed Falcon is only slightly shorter than the Kestrel's, but much thinner, and that of the Lesser Kestrel is short and thick (Plate XXXIII, Figure 1).

In the Hobby the corpus phalangis is slender, in dorsal view its contours are concave. In the Merlin the contours are straight (Plate XLV, Figures 29-30).

In the Hobby the condylus medialis of capitulum phalangis extends in distal direction more (Plate XLV, Figures 29-30), and the plantar edge of the condylus is more pointed, its appendix is bigger than in the Merlin. The plantar edge of condylus medialis is also pointed in the Red-footed Falcon, similar to that of the Hobby, but in the Kestrel its blunt (medial view) (Plate XLV, Figures 14-15).

The plantar appendix of condylus medialis is bending stronger in medial direction in the Hobby and Merlin than in the Kestrels.

The condylus medialis on the plantar side attaches to the corpus phalangis more evenly on a longer stretch in the Merlin than in the Hobby and the Kestrels. In the Red-footed Falcon the condylus medialis on the plantar side in proximal direction is very short, and attaches to the corpus very sharply, without any sloping (medial view)(Plate XLV, Figure 15).

The condylus lateralis in dorso-plantar direction is a bit higher, and in distal direction is located more forward (the difference is smaller between the distal edges of the condyli) in the Kestrel than in the other species, especially so in the Red-footed Falcon. Consequently in the Kestrel the sulcus intercondylaris is more developed and deeper than in the rest of the species. In the Red-footed Falcon this feature is practically missing (Plate XLV, Figures 29-30).

The plantar part of condylus lateralis in the Hobby is pointed, and in proximal direction very short. This extends backwards longer in the Merlin and Kestrel (in the Kestrel less so as a consequence of its shorter phalanx). In the Red-footed Falcon the part extending backwards becomes gradually thinner and hence attaches smoothly to the corpus.

### Summary

*Falco subbuteo:*

- the phalanx is long and narrow,
- the corpus phalangis is "slender" its contours are concave in dorsal view,
- the condylus medialis in distal direction is located more forward than in the other species, the length difference between the distal edges of the condyli is great (dorsal view),
- the plantar appendix of condylus medialis is big, pointed, and strongly bending in medial direction,

- the condylus medialis on the plantar side in proximal direction is short, and attaches to the corpus very suddenly,
- the condylus lateralis on the plantar side is pointed, short in proximal direction.

***Falco columbarius:***

- the phalanx is more or less long,
- the contours of corpus phalangis are parallel in dorsal view,
- the length difference between the distal edges of the condyli is great (dorsal view),
- the plantar appendix of condylus medialis is strongly bending in medial direction, and the plantar part of the condylus is attaches to the corpus gradually (medial view),
- the condylus lateralis on the plantar side extends long backwards in proximal direction (lateral view).

***Falco tinnunculus:***

- the phalanx is relatively short and thick,
- the length difference between the distal edges of the condyli is small, the sulcus intercondylaris is deep (dorsal view),
- the condylus medialis on the plantar side is blunt (medial view),
- the condylus lateralis is high in dorso-plantar direction, and on the plantar side extends long backwards in proximal direction (lateral view).

***Falco vespertinus:***

- the phalanx is short, more or less thin,
- there is practically no rim on the distal edge of the condylus lateralis, the length difference between the distal edges of the condyli is great (dorsal view),
- the condylus medialis on the plantar side is pointed, short in proximal direction, and attaches to the corpus very suddenly (medial view),
- the condylus lateralis is low in dorso-plantar direction, and on the plantar side extends long backwards in proximal direction and gradually tapering off as attaches to the corpus (lateral view).

***Falco naumanni:***

- the phalanx is short, thick,
- there is a bigger rim on the distal edge of the condylus lateralis, and hence the length difference between the distal edges of the condyli is small, the sulcus intercondylaris is formed (dorsal view),
- the condylus lateralis is low in dorso-plantar direction, and on the plantar side extends shortly backwards in proximal direction (lateral view).

### **Phalanx 2 digiti 4 posterior**

In the case of the phalanx 2 dig. 4 post. compared to the formerly discussed phalanx the length difference becomes more pronounced between the species (Plate XXXIII, Figure 1). The phalanx of the Hobby is considerably longer than that of the other species, does not overlap with the measures of the Kestrel, and only overlaps with the females of Merlin. The phalanx of the Kestrel is very short, and hence its length overlaps with the Merlin and Red-footed Falcon. The phalanx of the Lesser Kestrel is the shortest, but it is short in comparison as well, because – differently from the former phalanges – does not reach even the length of the Red-footed Falcon's phalanx.

The ratio of the length of the phalanx and the width of the corpus phalangis (**GL/CW**) is highest in the Hobby, and separates even from the Merlin. In the Kestrel as a consequence of

the shortness of the phalanx the **CW** value can not be measured safely, and this species is best separated from the others by the **GL/PW** and **GL/DW** ratios.

In the Hobby the proximal end of the bone is relatively wider and the capitulum phalangis is thinner than in the Merlin, and hence the phalanges of the two species can be identified with the help of the **PW/DW** and **GL/DW** ratios. The corpus phalangis in both species is more separated from the ends of the bones (the phalanx tapers off) than in the Kestrels. In the Red-footed Falcon the length of the phalanx is quite constant, and the ends of the bone are just slightly wider than the corpus (dorsal view) (Plate XLV, Figures 34-38). In the Kestrel and Lesser Kestrel the phalanx is so short that it looks as it would consist of two ends without a corpus.

In the Red-footed Falcon the edge of the proximal end of the bone from the tuberculum extensorium is extends in the same line in lateral direction as the apex of the tuberculum, and it is not waving but straight instead (Plate XLV, Figure 37).

The plantar edge of condylus medialis of capitulum phalangis is pointed in the Red-footed Falcon, and almost the same in the Hobby. In the Merlin this part is only slightly or not pointed, and in the Kestrel the condylus medialis in medial view is arch-shaped (Plate XLV, Figures 23-25).

In the Red-footed Falcon the depressio epicondylaris medialis and depr. epic. lateralis on the capitulum phalangis are almost impossible to detect, while in the Kestrel they are deep.

### Summary

#### ***Falco subbuteo:***

- the phalanx is long,
- the **GL/CW** ratio is high, can be used for the identification,
- the corpus phalangis is well separated from the ends of the bone (dorsal view),
- the proximal end of the bone is relatively wider than in the Merlin,
- the condylus medialis is pointed on the plantar edge (medial view).

#### ***Falco columbarius:***

- the phalanx is relatively long,
- the corpus phalangis is well separated from the ends of the bone (dorsal view),
- the capitulum phalangis is relatively wider than in the Hobby (dorsal view),
- the condylus medialis is not or only slightly pointed on the plantar edge (medial view).

#### ***Falco tinnunculus:***

- the phalanx is short and very thick, in dorsal view square,
- the **GL/PW** ratio is low, can be used for the identification,
- the corpus phalangis is practically missing,
- the condylus medialis is not pointed on the plantar edge, arch-shaped in medial view,
- the depressio epicondylaris medialis and lateralis are deep.

#### ***Falco vespertinus:***

- the thickness of the phalanx is longitudinally very even (dorsal view),
- the dorso-lateral edge of the proximal end of the bone is straight (dorsal view),
- the condylus medialis is pointed on the plantar edge (medial view),
- the depressio epicondylaris medialis and lateralis are almost impossible to detect, or missing.

#### ***Falco naumanni:***

- the phalanx is very small, quite short and thick,
- the corpus phalangis is practically missing.

### Phalanx 3 digiti 4 posterior

Among the phalanges of the 4th toe the third one shows the greatest length differences between the species. The Hobby, Merlin and Kestrel do not overlap in this measure. The phalanx of the Kestrel is very short and hence considerably overlaps with that of the Red-footed Falcon (Plate XXXIII, Figure 1).

The ratio of the length of the phalanx and the width of corpus phalangis (**GL/CW**) well separates the species. This value is highest in the Hobby and lowest in the Kestrel. The Lesser Kestrel is placed between the Red-footed Falcon and Kestrel by this ratio (Plate XXXIII, Figure 2).

In the Merlin the ends of the bones (especially the capitulum phalangis) are relatively wider than in the Hobby. The **GL/DW** and **GL/PW** ratios separates very well these species.

In the Hobby the section of the plantar side between the ends of the bones is straight, in the Merlin this section is concave (lateral view). In the Red-footed Falcon the plantar side from the proximal end of the bone to the capitulum phalangis is straight (but not parallel with the dorsal edge of the corpus) in the Kestrel and Lesser Kestrel this part is arched (Plate XLV, Figures 26-28).

In the Hobby the tuberculum intercondylare dorsale is big. In the Merlin this part is smaller, in the Red-footed Falcon hardly visible and in the Kestrel missing (Plate XLV, Figures 26-28).

In the Hobby and Merlin – as opposed to the Kestrels- the capitulum phalangis is small, and in lateral view its dorsal edge is either only slightly or not extends above the dorsal line of the corpus. In the Kestrels proximally from the capitulum phalangis on the dorsal side there is a strong incurvation that is strongest in the Red-footed Falcon. In the Hobby and Merlin this incurvation is negligible (Plate XLV, Figures 26-28).

In the Kestrel and Lesser Kestrel the distal edge of the condylus medialis extends only slightly further in distal direction than that of the condylus lateralis. In the other species this difference is greater, especially in the Red-footed Falcon and the Hobby (Plate XLV, Figures 39-43).

In the Red-footed Falcon the sulcus intercondylaris is deeper than in the Kestrel and Lesser Kestrel (Plate XLV, Figures 41-43).

In the Red-footed Falcon the medial and lateral sides of capitulum phalangis diverge stronger in the plantar direction (distal view) than in the rest of the species. The sides of the distal end of the bone are nearest to the parallel in the Kestrel.

### Summary

#### ***Falco subbuteo:***

- the phalanx is long, and relatively thin,
- the section of the plantar side between the ends of the bone is straight (lateral view),
- the tuberculum intercondylare dorsale is big,
- the dorsal edge of the capitulum phalangis either not or only slightly extends over the dorsal line of the corpus (lateral view),
- on the dorsal side, proximally from the capitulum phalangis there is almost no incurvation (lateral view).

#### ***Falco columbarius:***

- the phalanx is long, and the ends of the bones are relatively wide,
- the section of the plantar side between the ends of the bone is arched (lateral view),
- the dorsal edge of the capitulum phalangis either not or only slightly extends over the dorsal line of the corpus (lateral view),

- on the dorsal side, proximally from the capitulum phalangis there is almost no incurvation (lateral view).

***Falco tinnunculus:***

- the phalanx is short and thick,
- the plantar side in lateral view is arched,
- the capitulum phalangis is large, and is arched in lateral view,
- the distal edges of the condylus medialis and cond. lateralis extend approximately till the same line (dorsal view),
- the tuberculum intercondylare dorsale is missing,
- the dorsal edge of the capitulum phalangis extends well over the dorsal line of the corpus (lateral view),
- on the dorsal side, proximally from the capitulum phalangis there is a strong incurvation (lateral view).

***Falco vespertinus:***

- the phalanx is short, more or less thin,
- the plantar side till the capitulum phalangis is straight (lateral view),
- the distal edges of the condylus medialis extends much further than that of the cond. lateralis (dorsal view),
- the tuberculum intercondylare dorsale is small but visible,
- the dorsal edge of the capitulum phalangis extends well over the dorsal line of the corpus (lateral view),
- on the dorsal side, proximally from the capitulum phalangis the incurvation is strongest in this species (lateral view).

***Falco naumanni:***

- the phalanx is the smallest, short and relatively thick,
- the plantar side is arched (lateral view),
- the capitulum phalangis is relatively large, and is arched in lateral view,
- the dorsal edge of the capitulum phalangis extends well over the dorsal line of the corpus (lateral view),
- on the dorsal side, proximally from the capitulum phalangis there is a strong incurvation (lateral view).

**Phalanx 4 digiti 4 posterior**

For this phalanx all the information given for the phalanx 2 dig. 2 post. are relevant with the alterations indicated at phalanx 3 dig. 3 post. (Plate XXXIII, Figure 1).

**Phalanx 5 digiti 4 posterior**

For the talon of the 4th toe the morphological characteristics described at phalanx 2 dig. 1 post. are relevant, but in the measures the order of the species is sometimes changed.

The talon of the Kestrel still remains the longest, but the talon of the Hobby is slightly longer on this toe than that of the Merlin. The maximum values of the Red-footed Falcon and Lesser Kestrel are reaching the lower boundary of measures of the other species.

The ratio of the height and width of the proximal end of the bone (**PH/PW**) is the highest in the Hobby and Red-footed Falcon, as the end of the bone is the narrowest in these species. Then the Merlin follows. This ratio is the lowest in the Kestrel, as the end of the bone is the widest in this species.

### Some remarks on the phalanges of the foot

It is striking that the length of certain phalanges are more or less equal in some species, while others are very different. These different phalanges then cause a significant difference in the length of the toes between the species. The length differences between the phalanges are repeated consequently in every toe, but different phalanges are responsible for these differences.

As regards to the three bigger species (Hobby, Merlin and Kestrel) in every toe there is always a phalanx that is equal in length, one is significantly different (the lengths not or only slightly overlap) and one (or two) where the length of the phalanx of the species follows each other with considerable overlap.

The phalanges that are more or less **equal** in the different species are the following:

**ph. 1 dig. 1, ph. 2 dig. 2, ph. 3 dig. 3, ph. 4 dig. 4**

The phalanges that are **most different** are the following:

**ph. 2 dig. 3, ph. 3 dig. 4**

The phalanges that are **less different**:

**ph. 1 dig. 2, ph. 1 dig. 3, ph. 1 dig. 4 (ph. 2 dig. 4)**

We should notice that the similarly sized phalanges are located at the end of the toes (next to the talons), the greatest difference is found among the phalanges located in the middle, and those located at the front of the toes are the ones that are different but overlapping in size.

### SUMMARY

In my study I have completed the comparative osteomorphological study of smaller European Falcons, namely the Hobby (*Falco subbuteo*), Merlin (*Falco columbarius*), Eleonora's Falcon (*Falco eleonora*), Kestrel (*Falco tinnunculus*), Red-footed Falcon (*Falco vespertinus*) and the Lesser Kestrel (*Falco naumanni*). My main aim was to find reliable morphological characteristics for the differentiation and identification of these species, and furthermore through the measuring of a greater material of bones to get a statistically evaluable data set.

The results can be used for the identification of both fossil (JÁNOSSY, 1977) and recent (identification of remnants of bird diet). They allow the revision of fossil *Falco* material, and form the basis of functional morphological studies and taxonomic research.

The material examined was altogether 187 complete and incomplete skeletons of six species, which was gathered from nine Hungarian and European museums, research institutes and from a private collection. This study deals with all the important bones except the ribs, the backbones and some minute bones (os carpi ulnare, os carpi radiale, patella), even the phalanges are included. 3 to 10 measurements were taken on every bones, from which the minimum and maximum values, averages, variances, sum of squares were calculated.

The anatomical names follow the nomenclature of BAUMEL (1979), whose work is one of the most recent and detailed of this kind of studies. Where I couldn't find the name of the discussed anatomical part in this work I followed BALLMANN (1969), LANGER (1980), OTTO (1981) or SCHMIDT-BURGER (1982), these names are always indicated with the describer.

For the indications of directions there are controversial names in the literature. I followed BAUMEL (1979) therefore the directions in the discussion of the bones of the wing refer to an open wing position, the leg is treated as it would hang (not in a backwards stretched) position.

In the process of work up first I describe – in a General Part – some osteomorphological characters of the *Falco* genus. In the results I discuss the size measurements of each bone and species bone by bone, then I discuss the use of ratio values of the measurements that are very important tools in the identification of the species. Then I compare the morphological characteristics, then I summarise shortly the main features of each species one by one.

The morphological differences are shown on graphs, scatter diagrams and drawings. At the end in the appendix I give the Tables of measurements and ratio values.

The measurements were taken in the best possible agreement with the literature to enable the comparison of the already published data with my results. I gave the results in female, male and unknown sex categories, and hence the extent of sexual dimorphism can be calculated.

*I can summarise the main findings in the followings:*

**1. I described and summarised the most characteristic morphological features of the *Falco* genus.** The most important are:

- in the **cranium** the protrusion on the crista tomialis (falco tooth), the bone appendix on the middle of apertura nasi externa, the longitudinal rib on the palatal part of os premaxillare,
- in the **mandibula** the presence of fenestra mandibulae rostralis, the large size of the processus mandibulae lateralis, the complete lack of processus retroarticularis, the elevation of the dorso-medial edge of fossa caudalis (prominentia caudalis),
- in the **clavicula** the large size of processus acromialis,
- in the **coracoideum** the lack of processus lateralis,
- in the **scapula** the shape of the acromion different from that of the members of the Accipitridae and Pandionidae,
- in the **humerus** the presence of foramen nutricium on the ventral side of the proximal end of the bone, which is not found in other birds of prey,
- in the **sternum** the presence of spina interna, which is not found in the members of the Accipitridae and Pandionidae, furthermore the large size of foramen pneumaticum,
- in the **pelvis** the shape of the dorsal side of synsacrum and the praeacetabular part,
- in the **femur** the shape of facies articularis antitrochanterica, and the position of foramen pneumaticum,
- in the **tibiotarsus** the lack of processus cnemialis, and the two pons supratendineus bridging over the canalis extensorius,
- in the **tarsometatarsus** the presence of crista plantaris mediana, the lack of tuberositas musculi fibularis brevis, the position of the tuberositas musculi tibialis cranialis, the divided foramen vasculare distale, and the arched position of the trochleae.

**2. I showed the morphological differences of the bones of the species examined,** and grouped these characteristics in a form to facilitate the identification of the species. I can conclude that the same bones of the different species are usually easily separated.

The main morphological features are the following:

**Cranium** – the shape of the neurocranium, the longitudinal rib on the palatal part of os premaxillare, the shape of the os palatinum.

**Mandibula** – the openness of fenestra mandibulae rostralis, the shape of prominentia caudalis.

- Clavicula** – the shape and size of the omal end of the bone, the width of scapus claviculae, the shape of apophysis furculae.
- Coracoideum** – the shape and size of the omal end of the bone, the presence or absence of processus lateralis.
- Scapula** – the size of caput scapulae, the shape of margo dorsalis at the caudal end of the bone.
- Humerus** – the size of crista pectoralis, the width and bend of the corpus, the size of tuberculum supracondylare dorsale.
- Radius** – the sizes and separation of tuberculum aponeurosis and tuberculum ulnare.
- Ulna** – the bend of the longitudinal axis, the widening of the corpus in proximal direction, the size of the olecranon.
- Carpometacarpus** – the shape of os metacarpale minus, the size of facies articularis digitalis minor.
- Sternum** – the size of the sternum, the size and shape of carina sterni, the shape of spina externa and the size of spina interna.
- Pelvis** – the elongation of the pelvis, the ratio of the diameter of foramen acetabuli and the distance between the acetabula, the shape of margo ischiocaudalis and ala ischii.
- Femur** – the bend of corpus femoris and its widening towards the ends of the bone, the shape of the crista trochanteris and cristas of trochlea patellaris.
- Tibiotarsus** – the position of crista patellaris and crista interna compared to each other, the size and shape of the condyli.
- Tarsometatarsus** – the size of the ends of the bone, the shape of crista medialis hypotarsi, the relative position of the trochleae.
- Phalanges digitorum pedis** – the thickness of the phalanges, the shape of the proximal end of the bone, (the size of the tubercula), the presence or absence of cristae plantares, the shape and size of the trochlea, the size of tuberculum intercondylaris dorsalis. In the talons the ratio of height and width of the proximal end of the bone, the size and shape of tuberculum extensorium.

3. The high number of **measurements** (3-10) taken on the bones fills a gap in the literature. As a consequence of the high number of bones measured the statistical evaluation of the data is also possible. The calculated ratios are extremely important in the identification of the species, as these ratios are more characteristic than the absolute sizes. This is particularly important in the case of the fossil material, where we have to take into account the today extinct species and subspecies (e.g. *Falco tinnunculus atavus* JÁNOSSY, 1972), too.

The different lengths of the bones of the studied species refer to the difference in their stature. We can conclude that the bones of the wing of the Merlin compared to the other species is very short, and that of the Eleonora's Falcon, Lesser Kestrel and Red-footed Falcon is relatively long. In the case of the leg the longest bones are found in the Kestrel and Merlin, the shortest in the Red-footed Falcon, Hobby and Eleonora's Falcon.

More calculations can be carried out on the percentage ratios of the certain elements of the bones of the trunk, wing and leg compared to the total length of these parts of the body. These ratio percentages can be applied to functional conclusions. I could not deal with these questions in this work due to length requirements, and these will be treated in a later work.

I showed quantitatively the extent of sexual dimorphism of the species with the grouping of data into sex categories within the species. This is greater in the Hobby, Merlin and Eleonora's Falcon to such a degree, that the sex of the specimen usually can be identified from the sizes of the bones. These is not so in the case of the Kestrels, where the sexual dimorphism is much smaller.



4. With the detailed **morphological study of the phalanges** of the legs and wings I started the research of a new domain. This topic was neglected up to now, but the legs are used in hunting in raptors, and hence there is a strong correlation between the form and function here. This is indicated by the longer digits of the Hobby and Merlin that are mainly feeding on smaller birds, and the shorter ones of the Kestrels that are mainly hunting for small mammals and insects.

The study of the phalanges is also important for the paleontological research, as these bones are relatively frequently found in fossil materials.

5. The **nomenclature** of certain bones is supplemented, where I did not find appropriate names in the literature for a given anatomical part. The **new names** are the following:

Mandibula:	prominentia caudalis
Quadratum:	processus quadratojugalis
Radius:	tuberculum ulnare
Ossa digitorum manus	
Phalanx digiti minoris:	prominentia caudalis
Ossa digitorum pedis	
Phalanges proximales et intermediae:	tuberculum collaterale mediale
	tuberculum collaterale laterale
	crista plantaris medialis
	crista plantaris lateralis
	crista dorsalis medialis
	crista dorsalis lateralis
	condylus medialis
	condylus lateralis
	depressio epicondylaris medialis
	depressio epicondylaris lateralis
	sulcus intercondylaris
	tuberculum intercondylare dorsale
Phalanx distalis (ungularis):	tuberculum flexorium major
	crista medialis
	foramen vasculare mediale
	foramen vasculare laterale

The topographic identification of these new names is shown on Plate III.

6. Based on the osteological similarities I pointed out the **relatedness** of the discussed species. Two main groups could be identified. One is formed by *F. subbuteo*, *F. eleonora* and *F. columbarius*, while the other is by *F. tinnunculus*, *F. naumanni* and *F. vespertinus*. But the two group is not unified at all. From the first *F. columbarius*, while from the second *F. vespertinus* is a bit outsider as a consequence of their slightly different morphological characteristics.

These differences might form the basis for the establishment of subgenus within the *Falco* genus.

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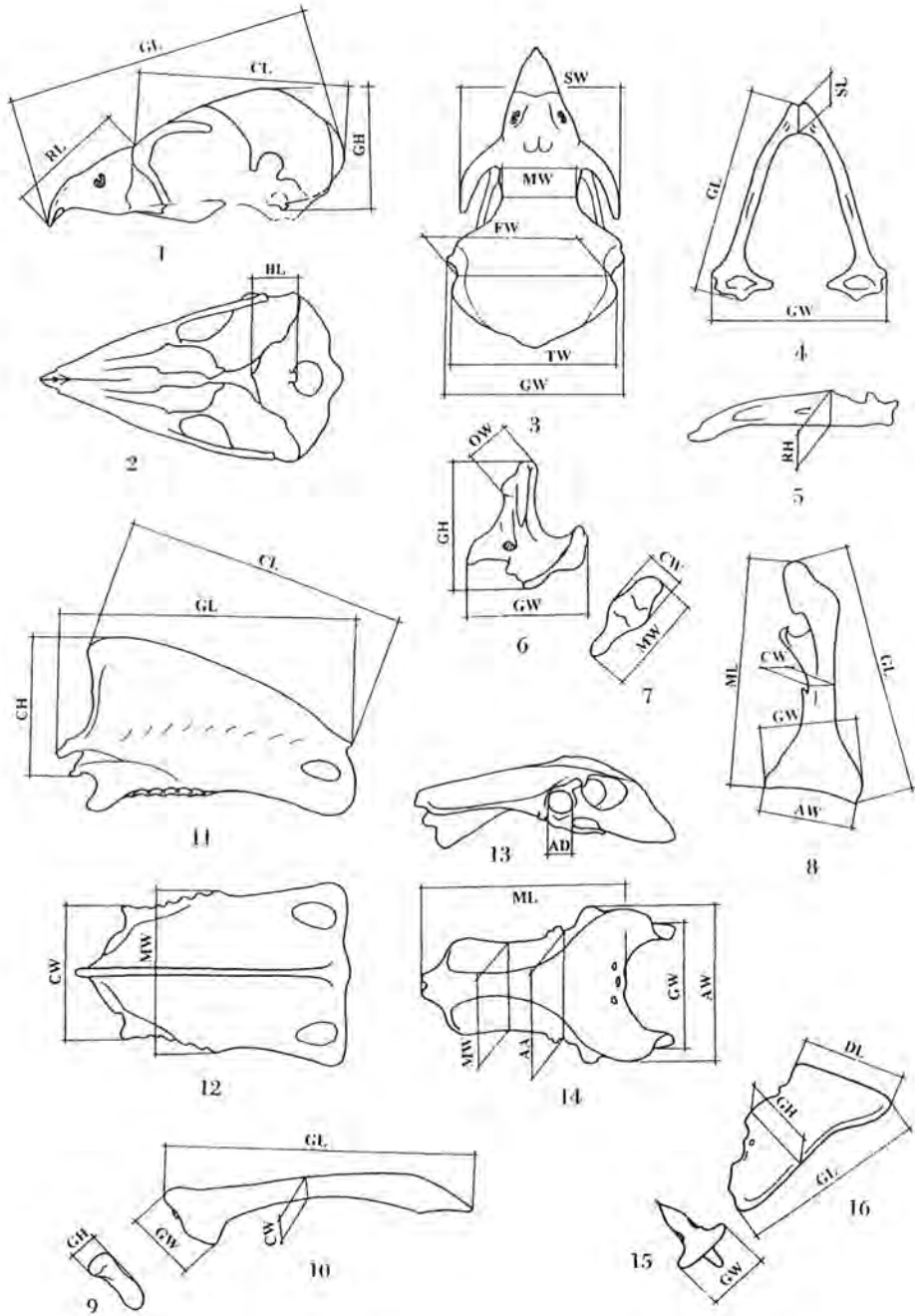


Plate I: Measuring points (annotation is in the text).

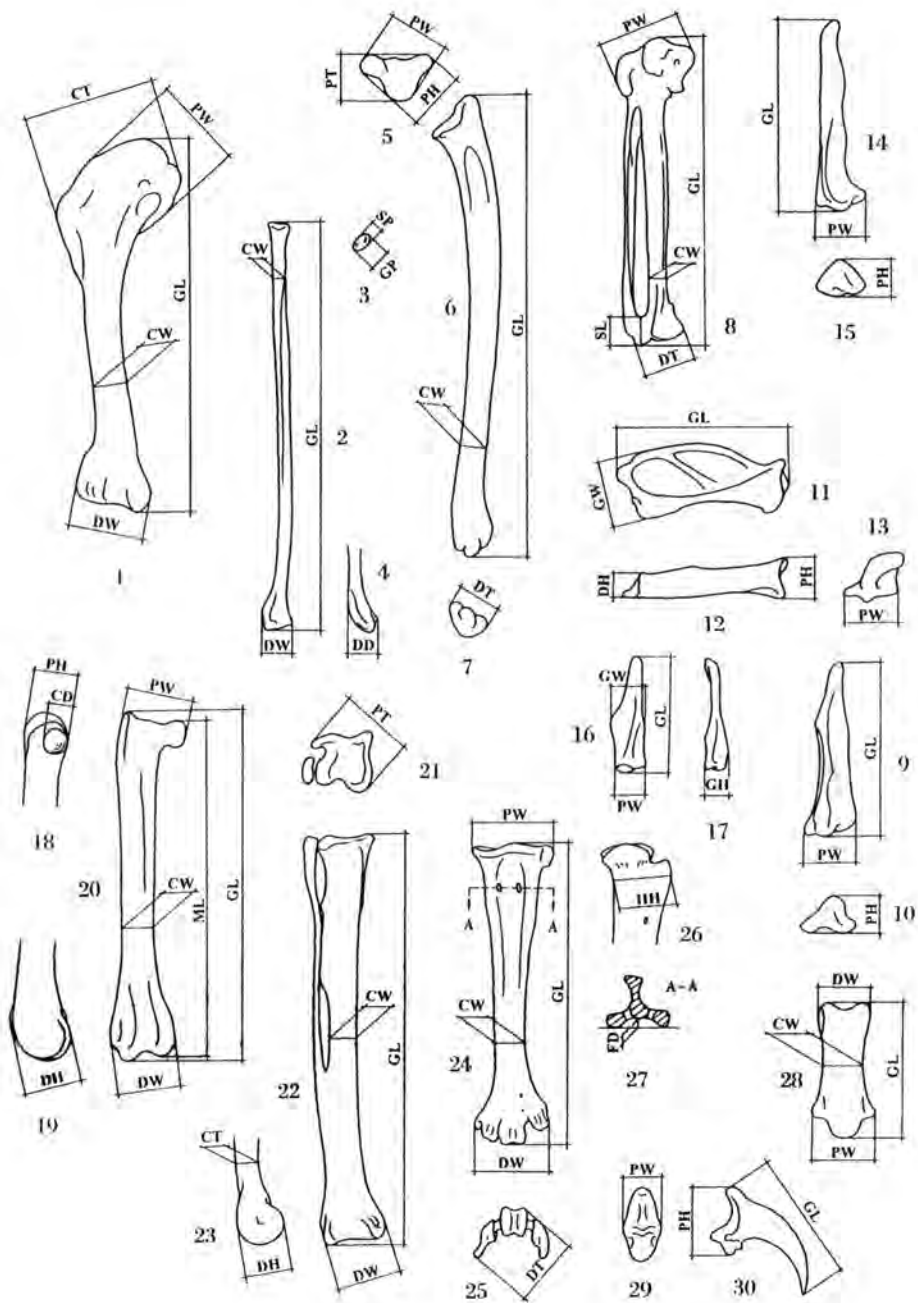
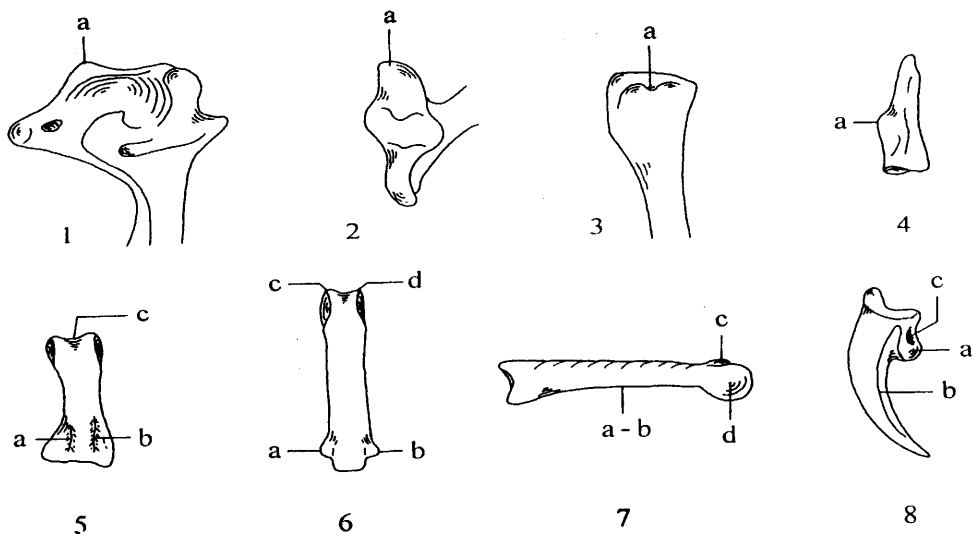
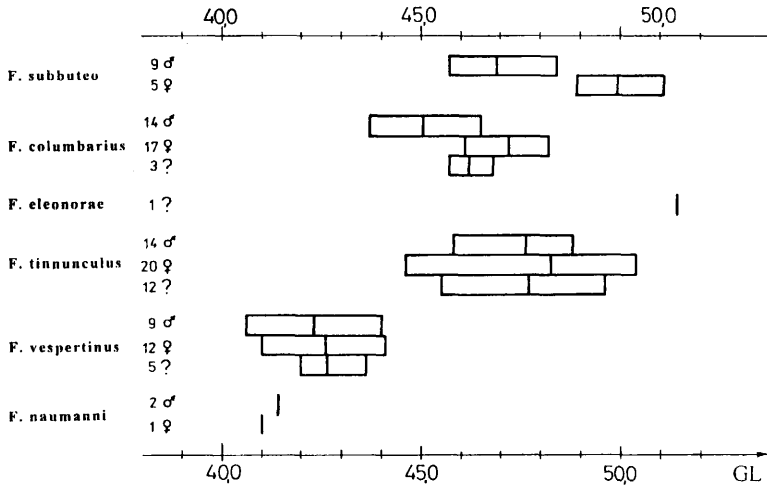


Plate II: Measuring points (annotation is in the text).



**Plate III:** The new anatomical names. **1:** *F. columbarius*, mandibula, caudal end of the bone, dorsal view, **a** = prominentia caudalis – **2:** *F. columbarius*, quadratum, the articular surface of processus mandibularis, **a** = processus quadratojugalis – **3:** *F. vespertinus*, radius, distal end of the bone, ventro-caudal view, **a** = tuberculum ulnare – **4:** *F. tinnunculus*, phalanx 1 digiti 3 anterior, ventral view, **a** = prominentia caudalis – **5:** *F. vespertinus*, phalanx 1 digiti 2 posterior, dorsal view **a** = crista dorsalis lateralis, **b** = crista dorsalis medialis, **c** = sulcus intercondylaris – **6:** *F. subbuteo*, phalanx 3 digiti 3 posterior, dorsal view, **a** = tuberculum collaterale laterale, **b** = tuberculum collaterale mediale, **c** = condylus lateralis, **d** = condylus medialis – **7:** *F. subbuteo*, phalanx 2 digiti 3 posterior, lateral view, **a** = crista plantaris medialis, **b** = crista plantaris lateralis, **c** = tuberculum intercondylare dorsale, **d** = depressio epicondylaris lateralis – **8:** *F. subbuteo*, phalanx 4 digiti 3 posterior, medial view, **a** = tuberculum flexorium major, **b** = crista medialis, **c** = foramen vasculare mediale.

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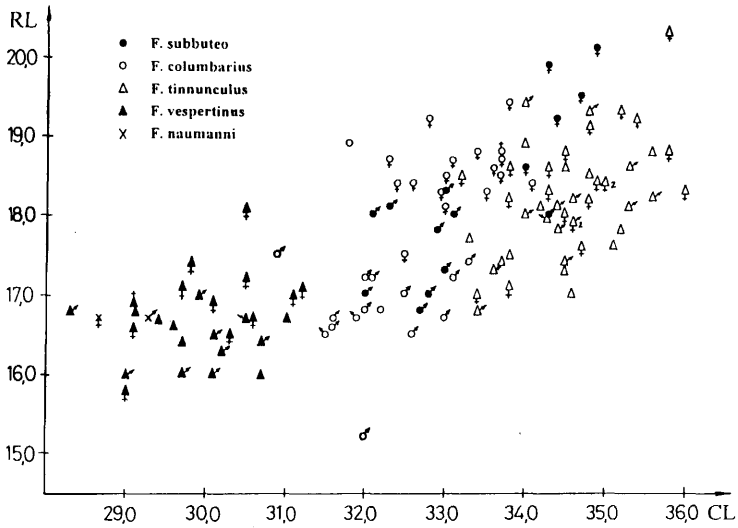
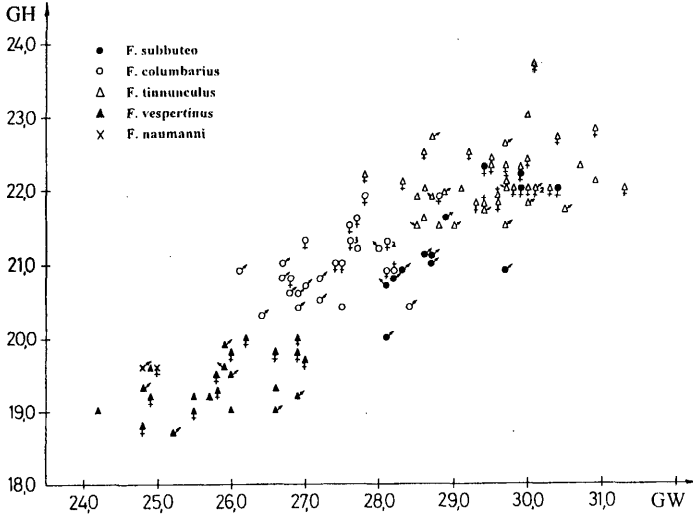
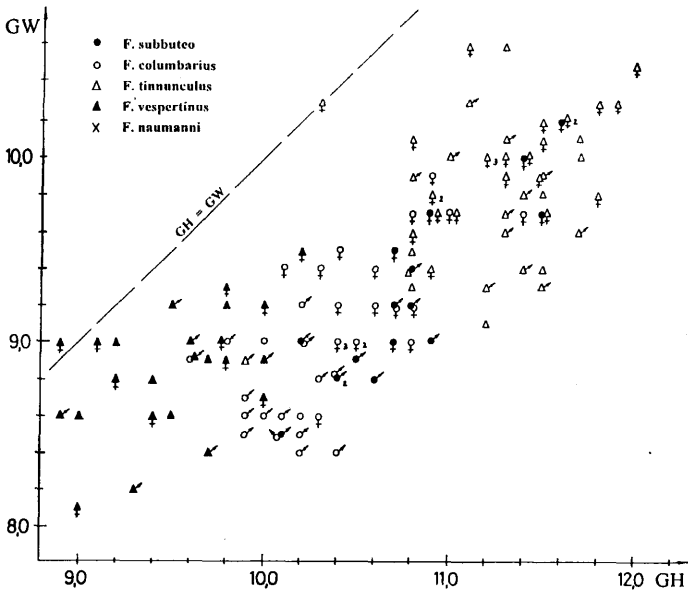


Plate IV – Figure 1: Cranium. GL = greatest length (in mm). Figure 2: Cranium. CL = caput (head) length, RL = rostrum (beak) length (in mm).

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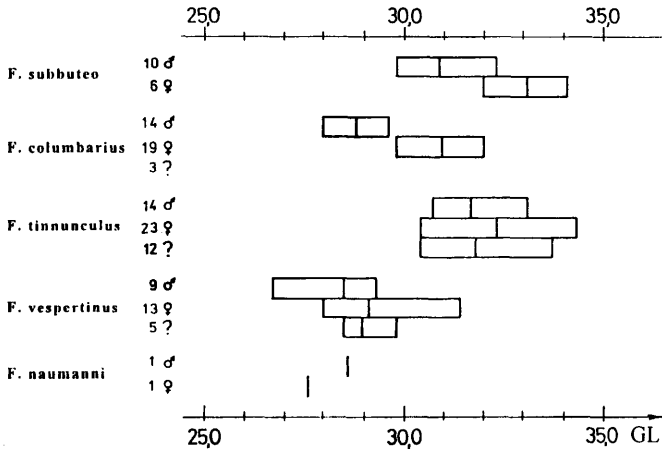


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**Plate V – Figure 1:** Cranium. GW = greatest width, GH = greatest height (in mm). **Figure 2:** Quadratum. GH = greatest height, GW = greatest width (in mm). At the broken line (GH = GW) the quadratum is square.

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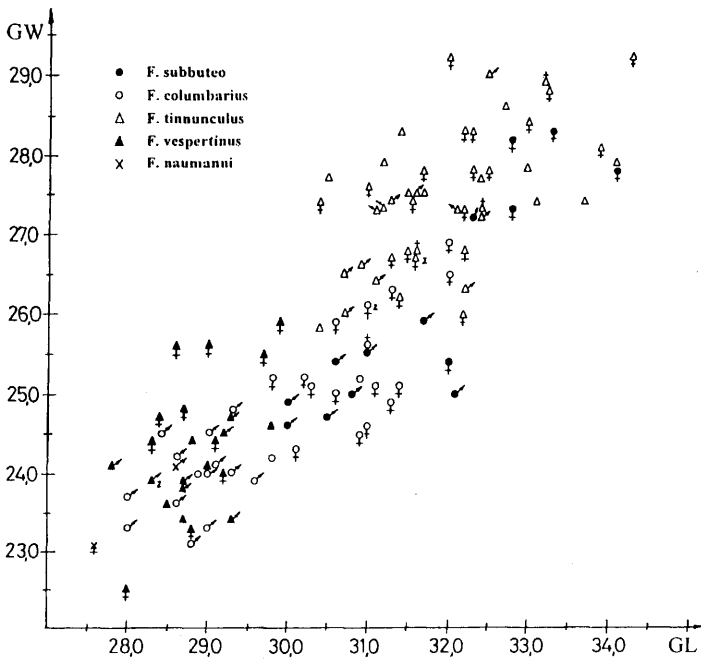
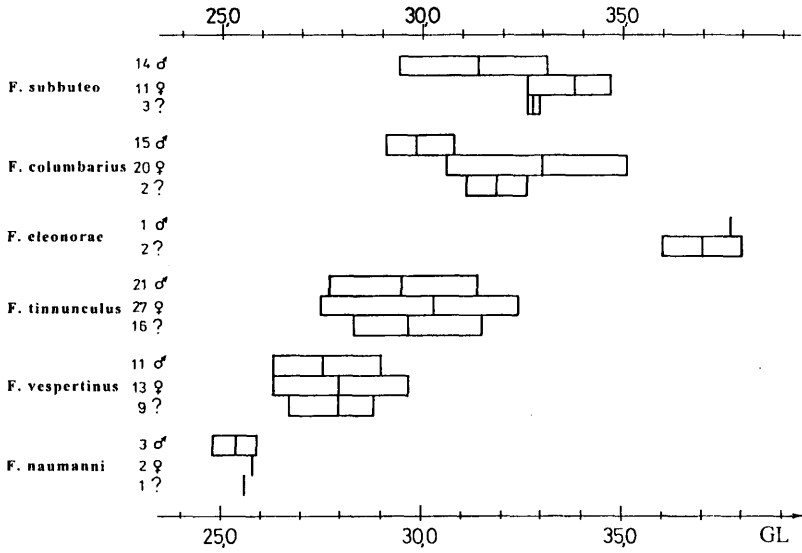


Plate VI – Figure 1: Mandibula. GL = greatest length (in mm). Figure 2: Mandibula. GL = greatest length, GW = greatest width (in mm).



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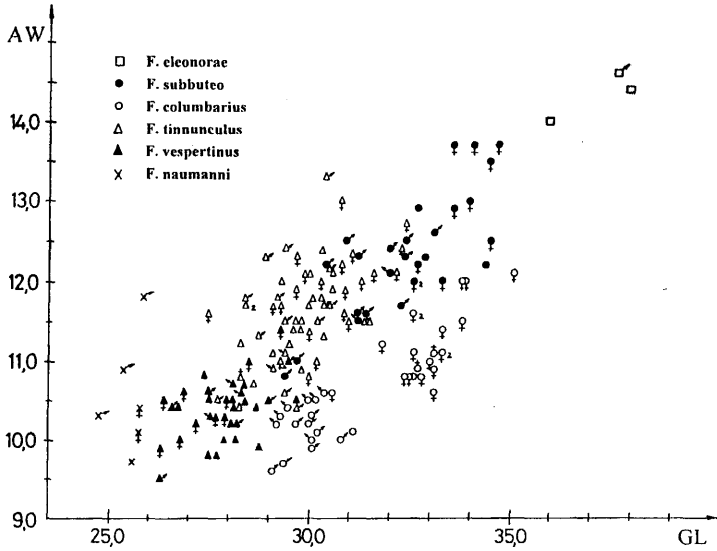
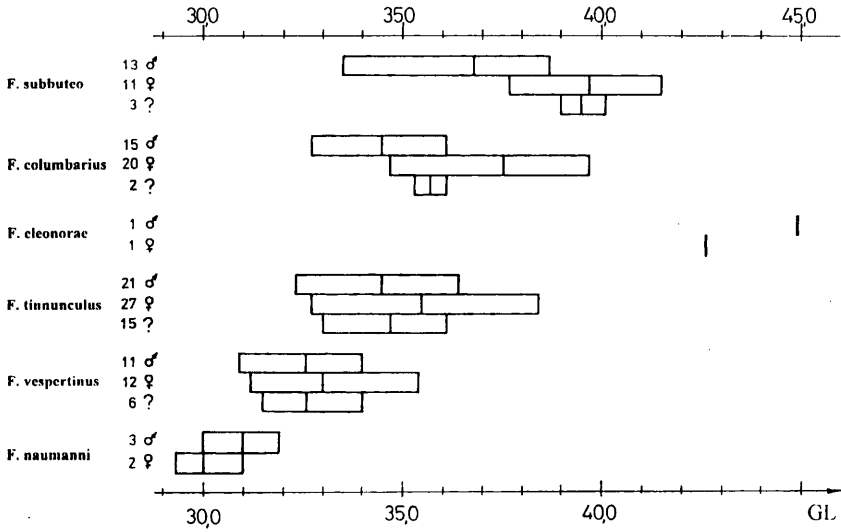


Plate VII – Figure 1: Coracoideum. GL = greatest length (in mm). Figure 2: Coracoideum. GL = greatest length, AW = articular width (in mm).

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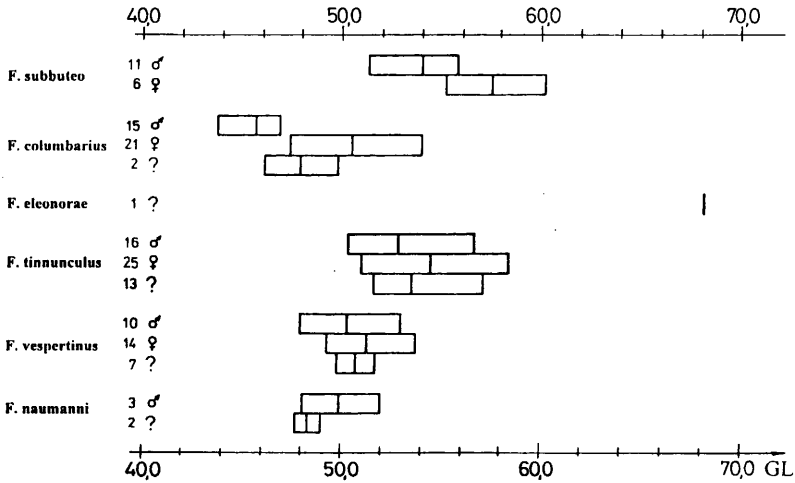
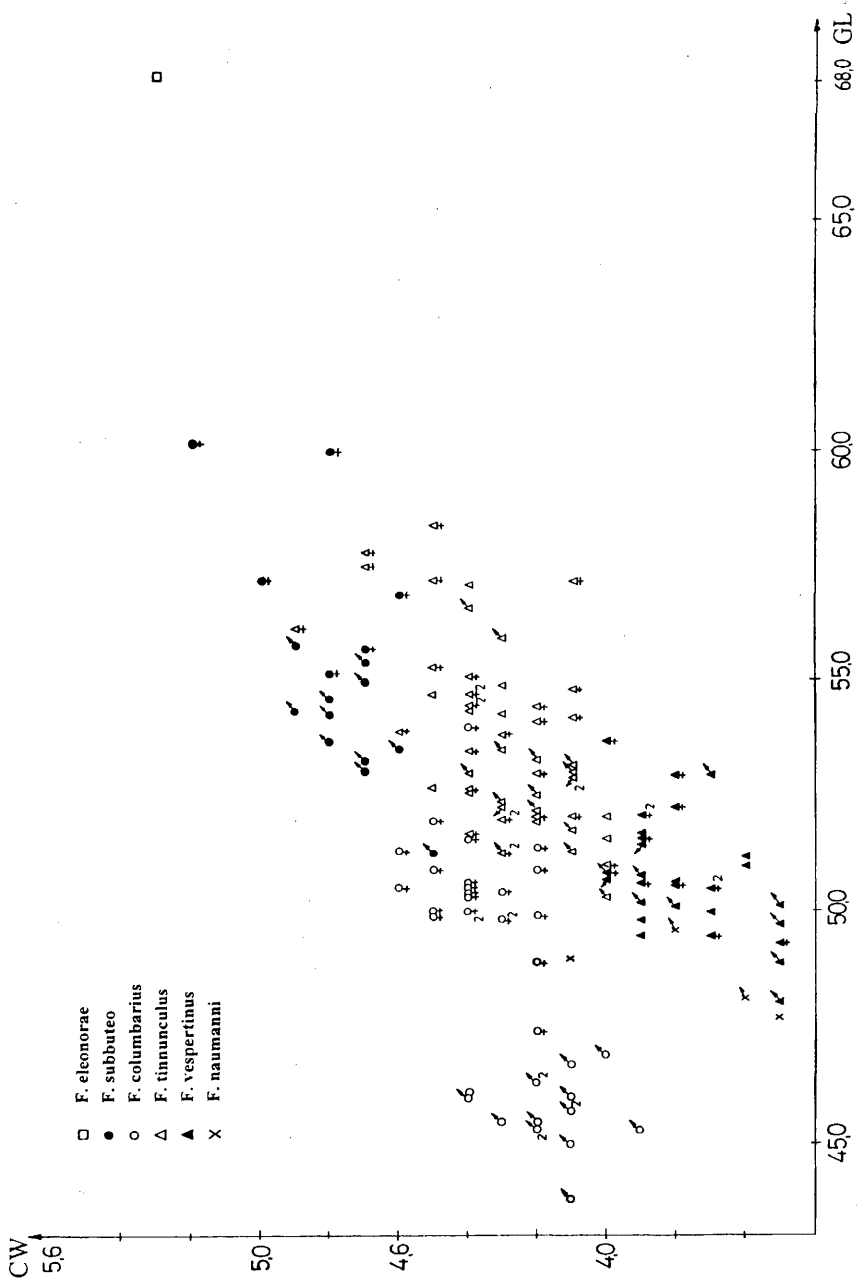


Plate VIII - Figure 1: Scapula. GL = greatest length (in mm). Figure 2: Humerus. GL = greatest length (in mm).



**Plate IX – Figure 1: Humerus.** GL = greatest length, CW = the smallest width of corpus humeri (in mm).

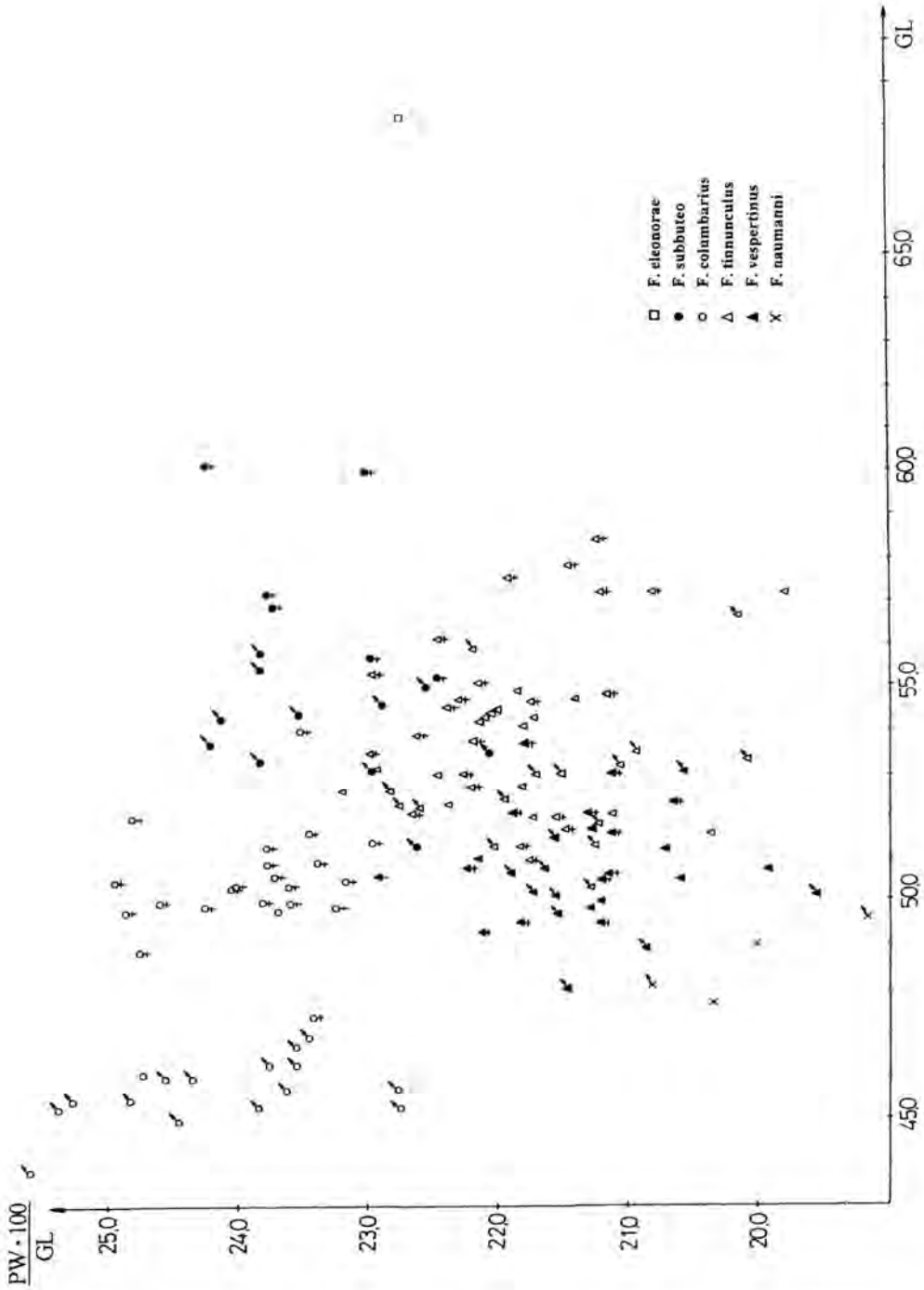
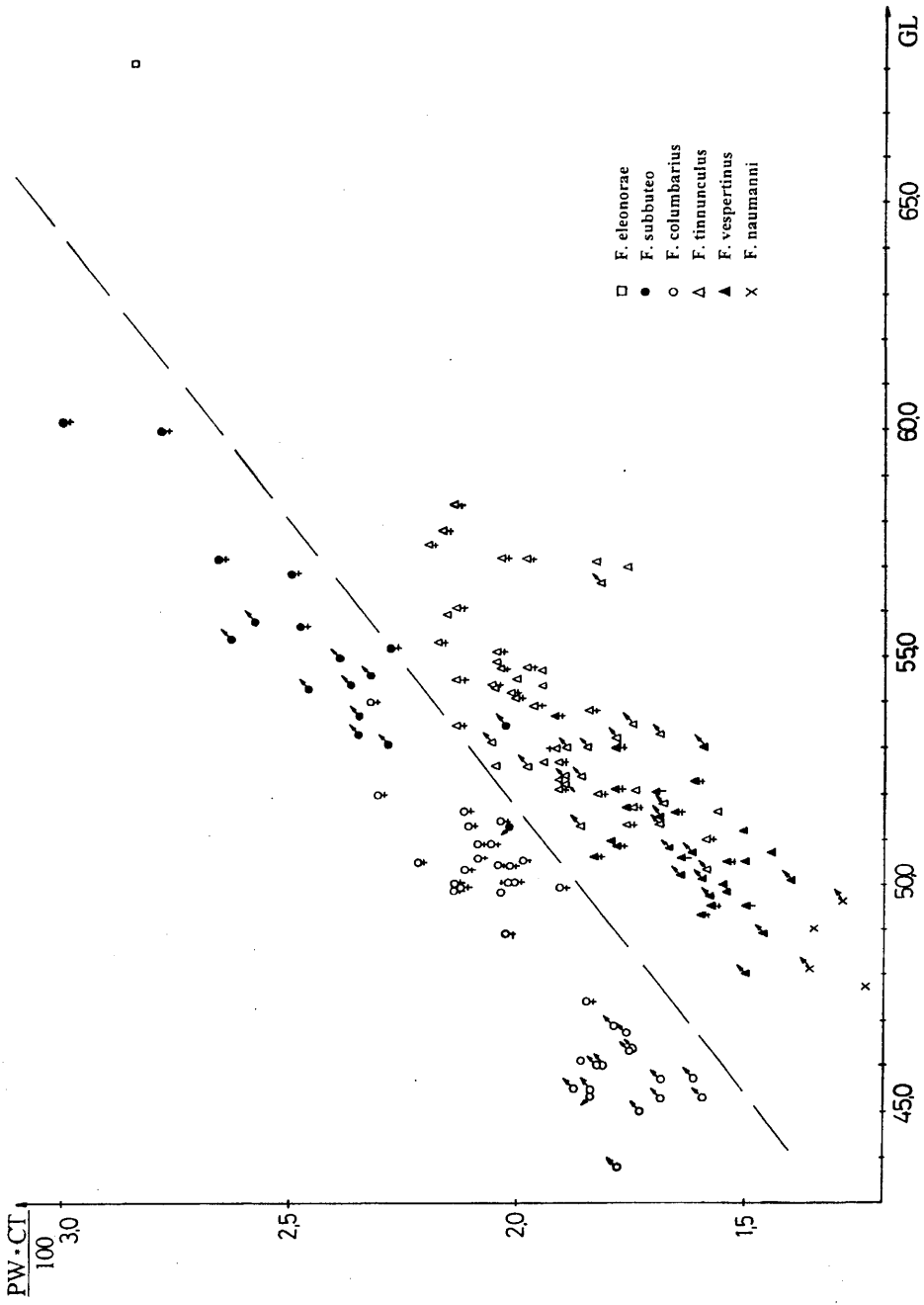
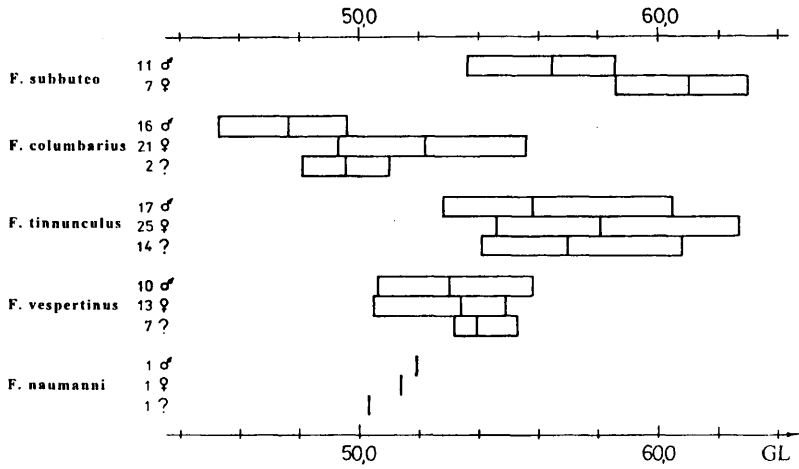


Plate X – Figure 1: Humerus. GL = greatest length, PW = greatest proximal width (in mm).



**Plate XI – Figure 1:** Humerus. GL = greatest length, PW = greatest proximal width, CT = the distance between the crista pectoralis and tuberculum ventrale (in mm).

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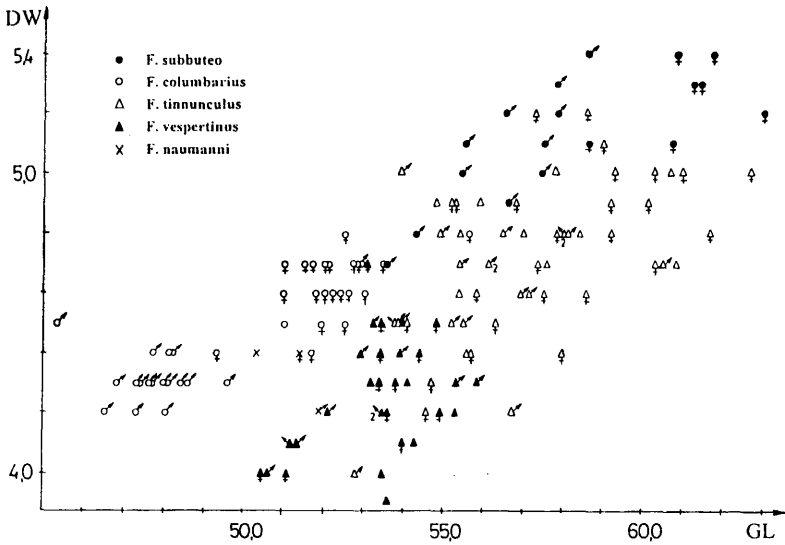
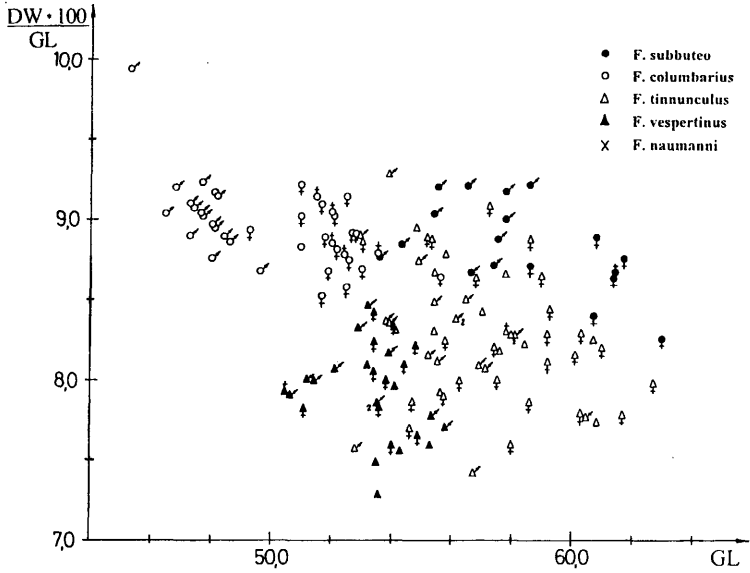


Plate XII – Figure 1: Radius. GL = greatest length (in mm). Figure 2: Radius. GL = greatest length, DW = the greatest distal width (in mm).

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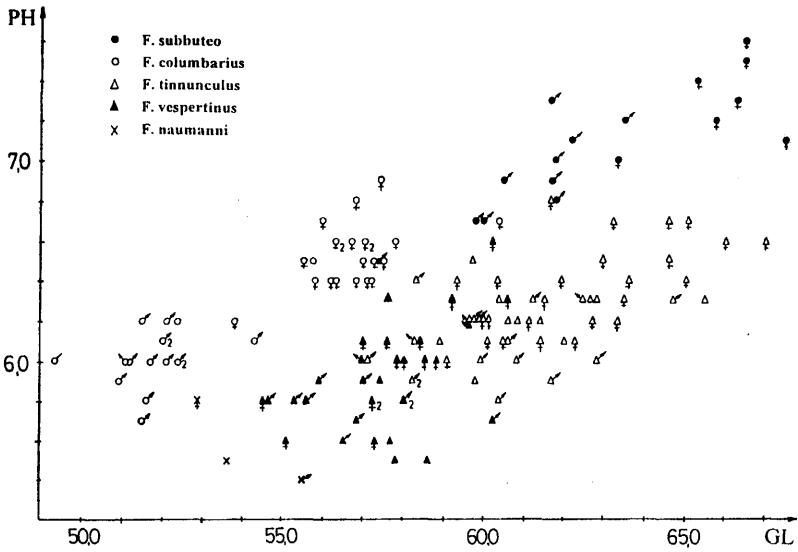
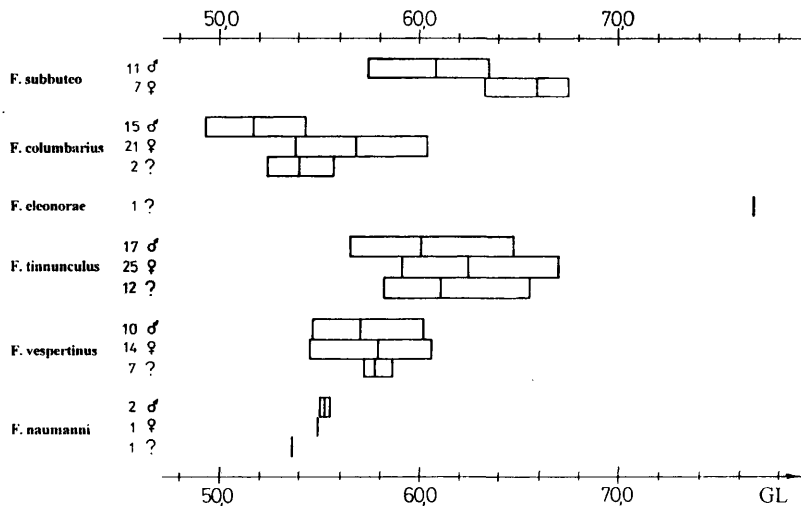


Plate XIII – Figure 1: Radius. GL = greatest length, DW = the greatest distal width (in mm).  
Figure 2: Ulna. GL = greatest length, PH = the greatest proximal height (in mm).

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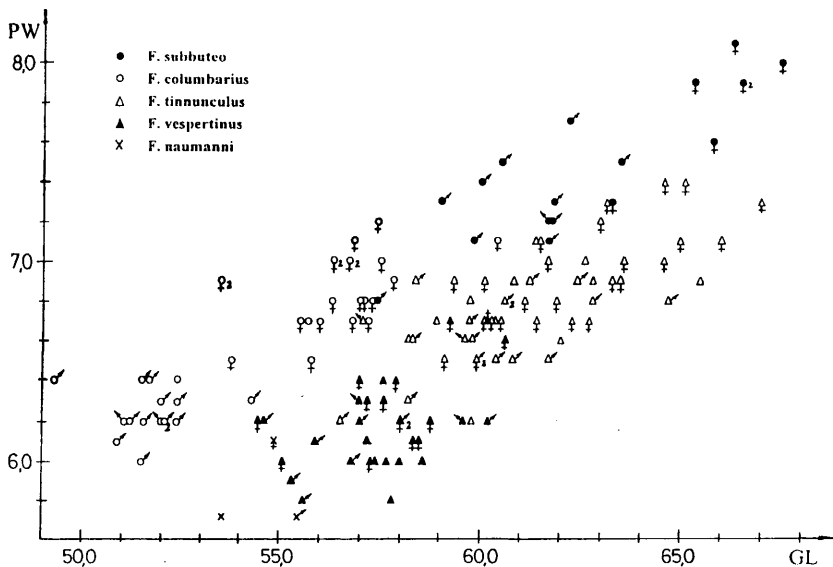


Plate XIV – Figure 1: *Ulna*. GL = greatest length (in mm). Figure 2: *Ulna*. GL = greatest length, PW = the greatest proximal width (in mm).



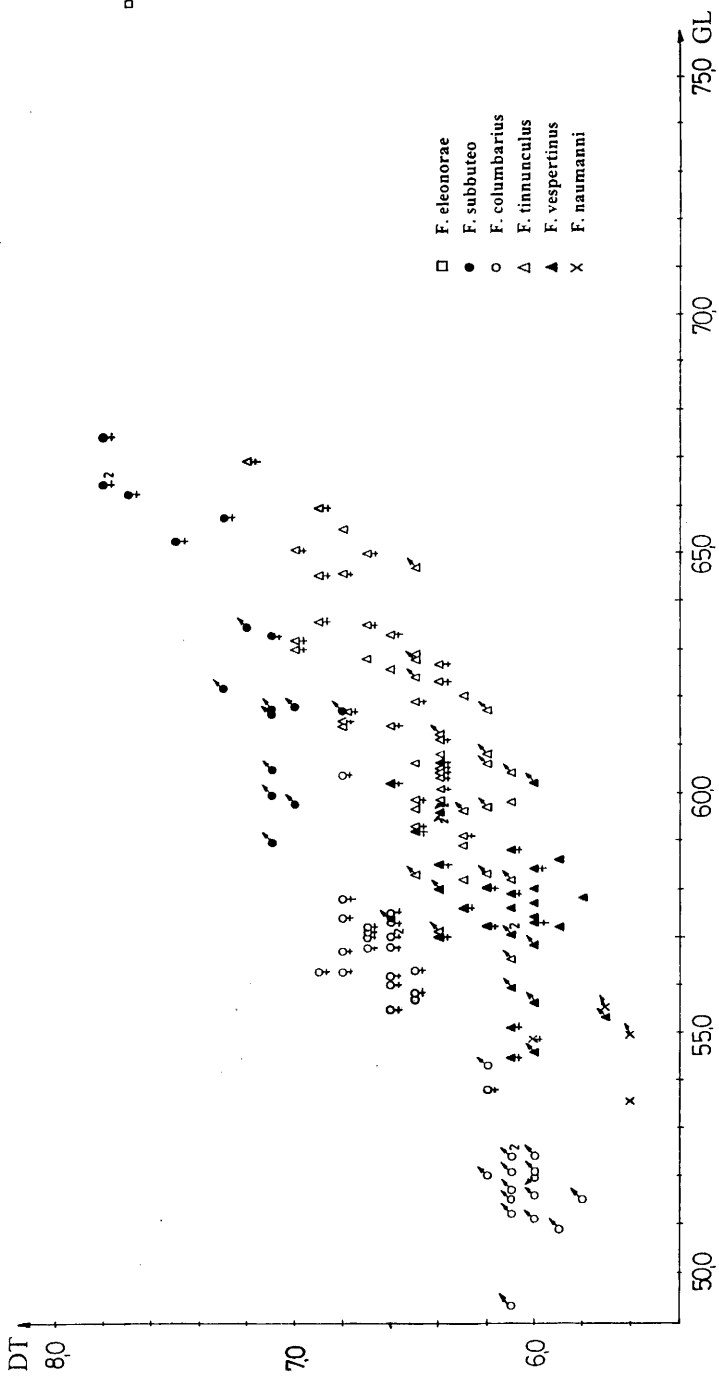
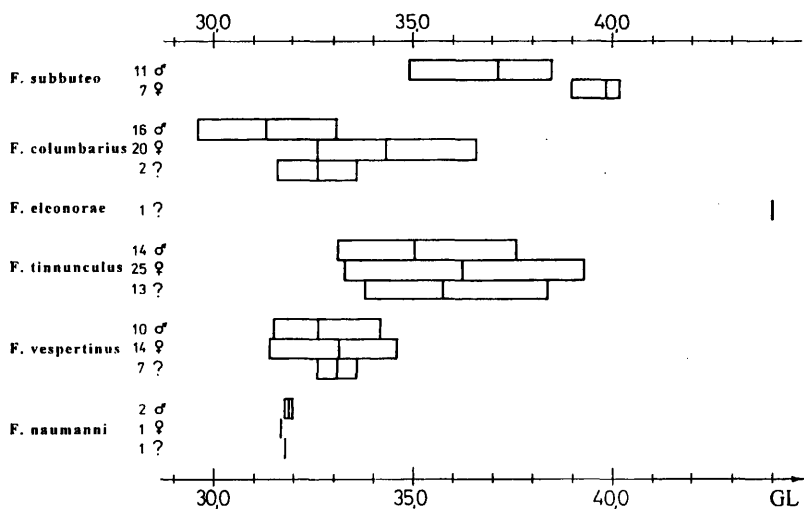


Plate XV – Figure 1: Ulna. GL = greatest length, DT = the greatest transverse measure of the distal end of the bone (in mm).

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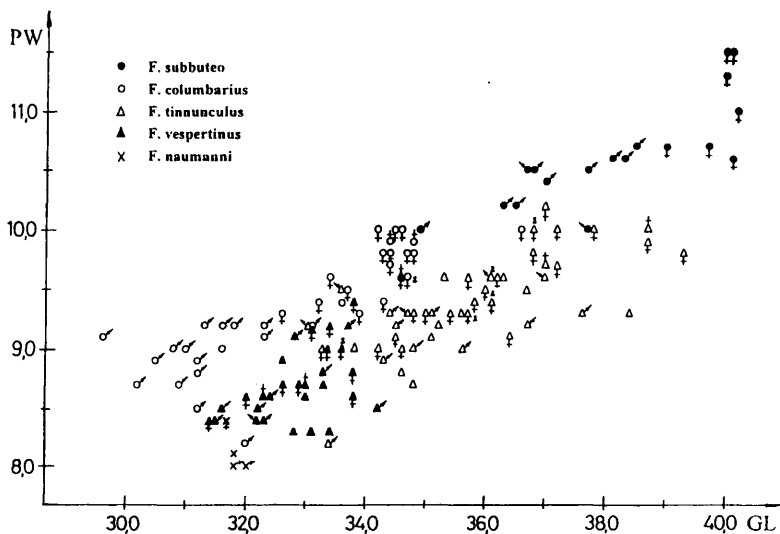
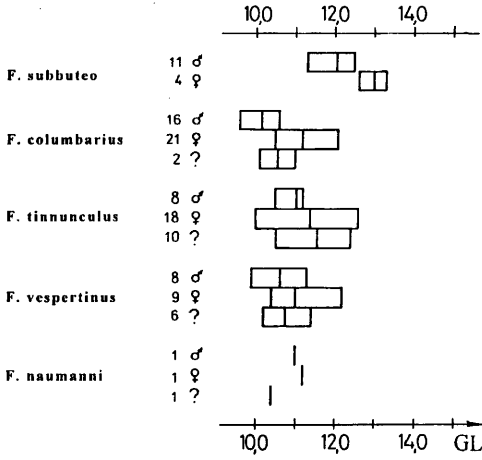


Plate XVI – Figure 1: Carpometaurus. GL = greatest length (in mm). Figure 2: Carpometaurus. GL = greatest length, PW = the greatest proximal width (in mm).

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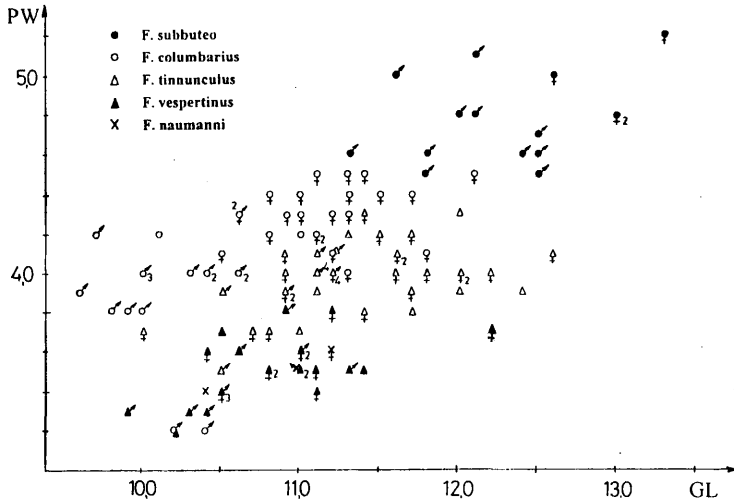
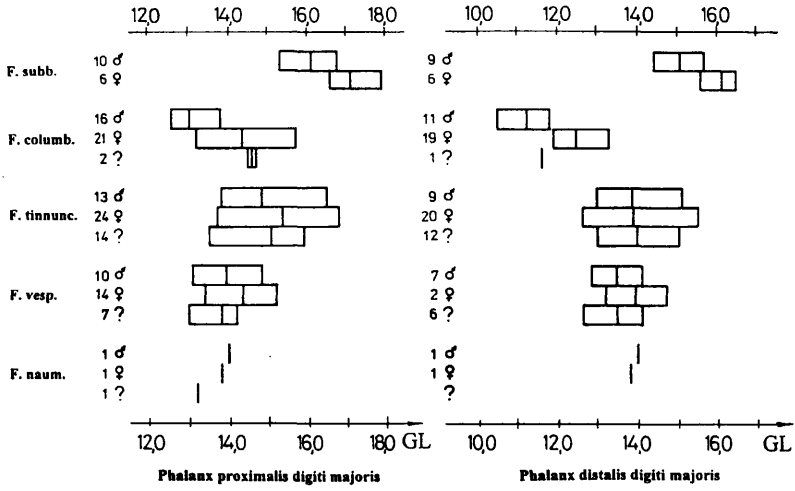


Plate XVII – Figure 1: Phalanx digiti alulae (phalanx 1 digiti 1 anterior). GL = greatest length (in mm). Figure 2: Phalanx digiti alulae (phalanx 1 digiti 1 anterior). GL = greatest length, PW = the greatest proximal width (in mm).

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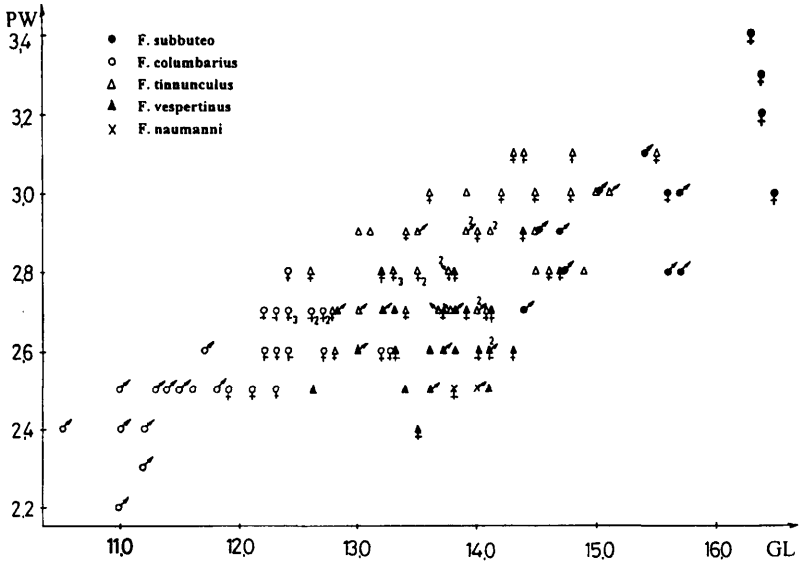
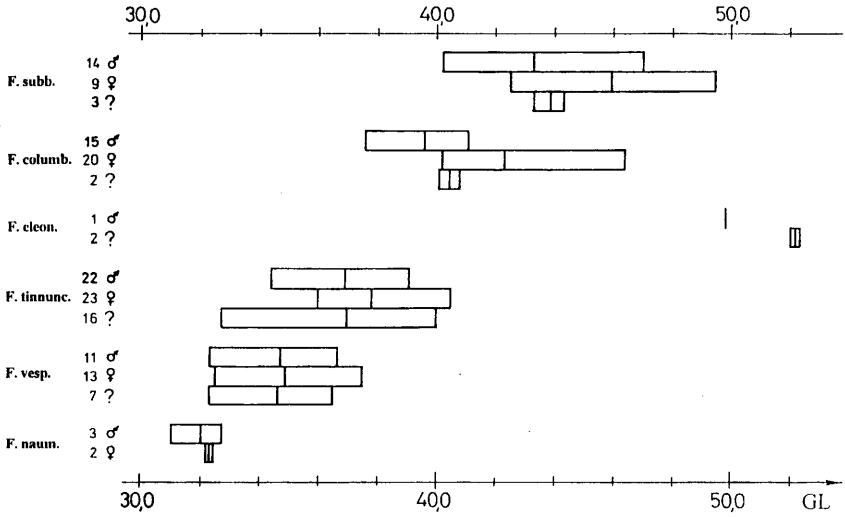
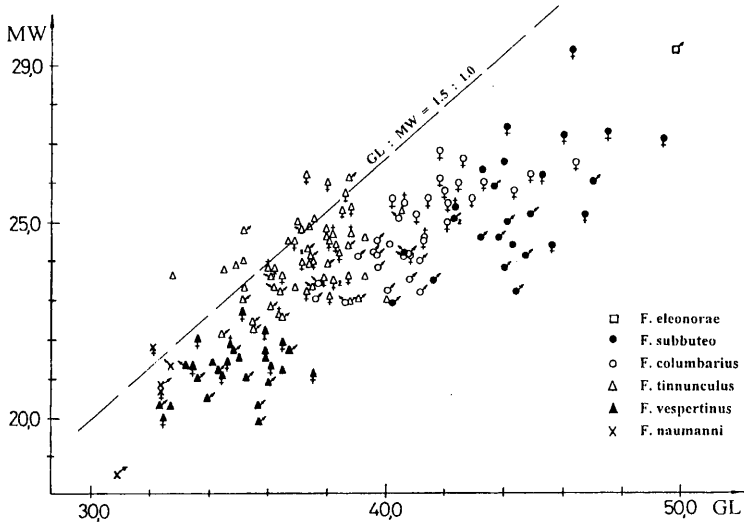


Plate XVIII – Figure 1: The phalanges of the digit of the wing. GL = greatest length (in mm).  
 Figure 2: Phalanx distalis digiti majoris (phalanx 2 digiti 2 anterior). GL = the greatest length of the phalanx, PW = the greatest proximal width (in mm).

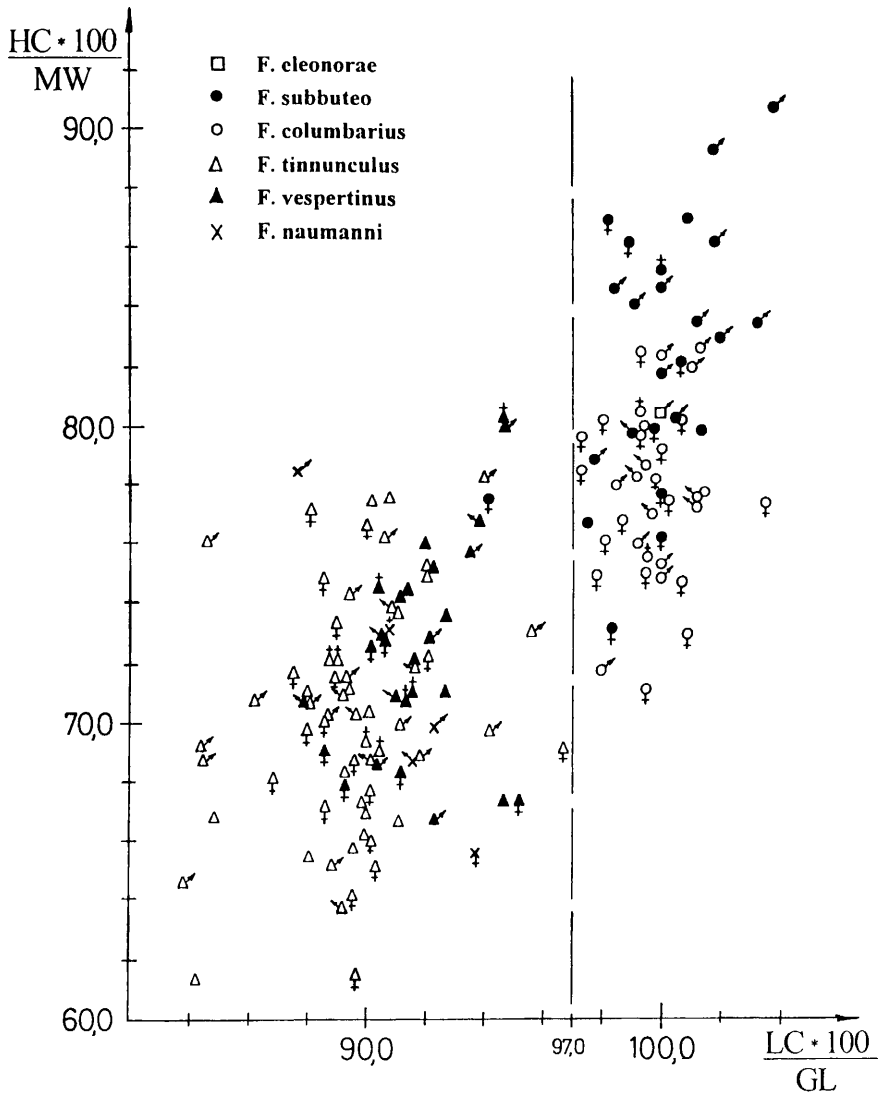
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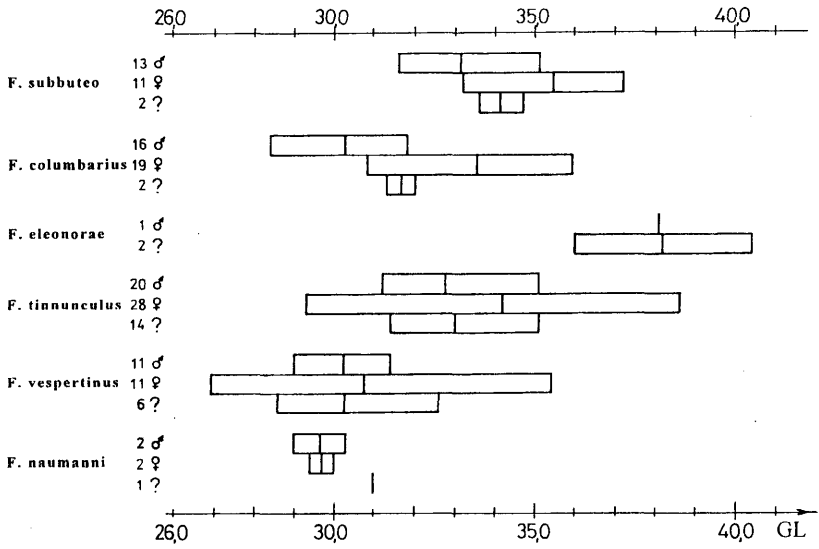


**Plate XIX – Figure 1:** Sternum. GL = greatest length (in mm). **Figure 2:** Sternum. GL = greatest length, MW = medial width (in mm). Under the broken line the sternum is more elongated, while over it more square.



**Plate XX – Figure 1:** Sternum. CL = length of carina sterni, GL = greatest length of the sternum, CH = height of carina sterni, MW = medial width of the sternum (in mm). The CL/GL value in the Hobby and Merlin is higher than 97,0 percent (broken line), while this value is lower in the Kestrels.

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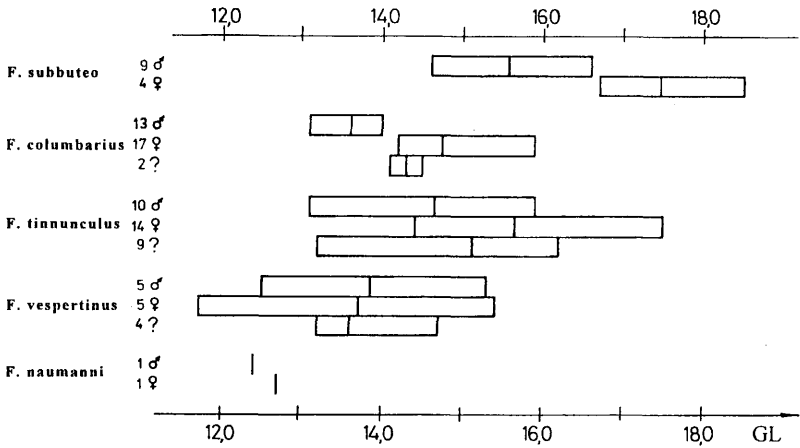
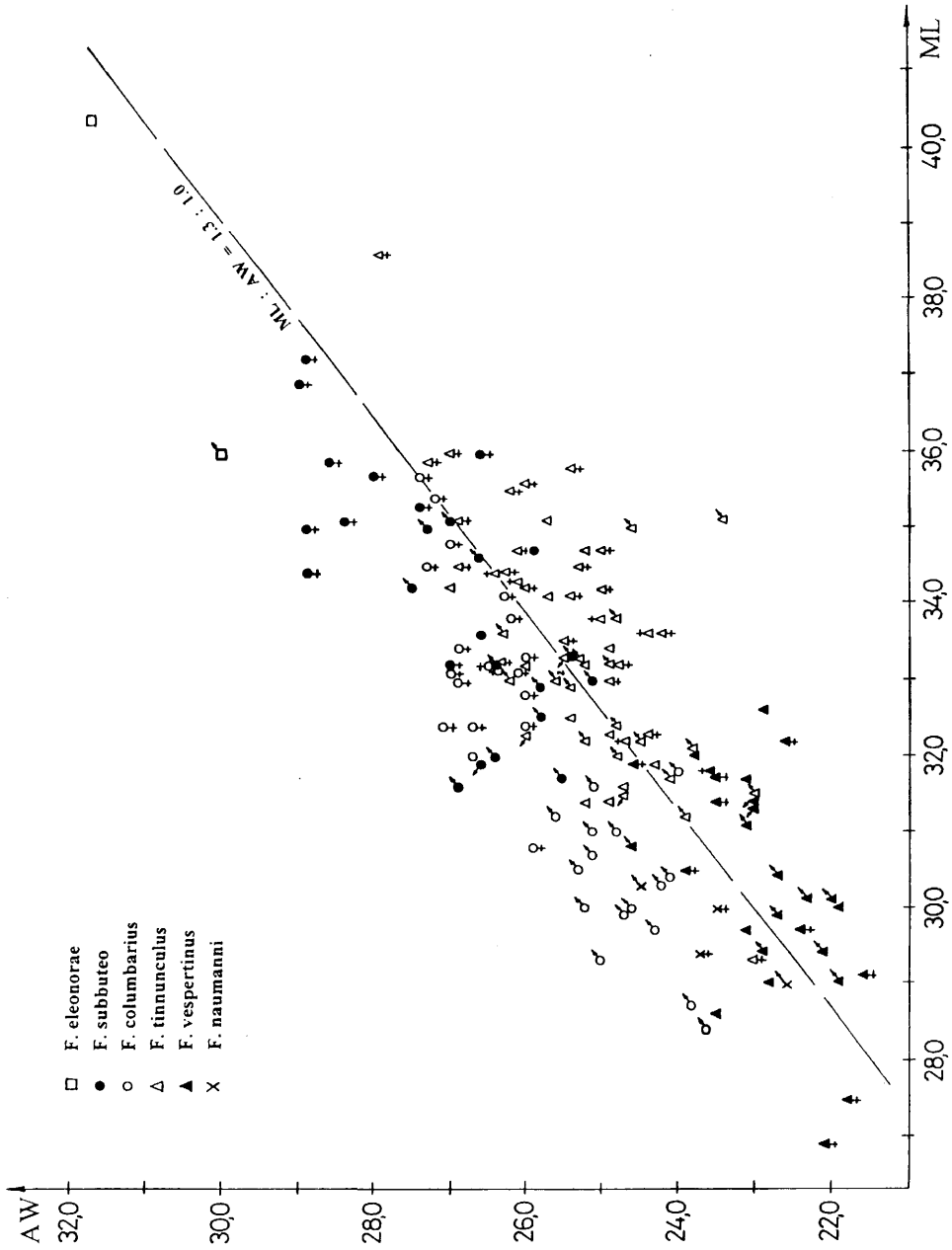


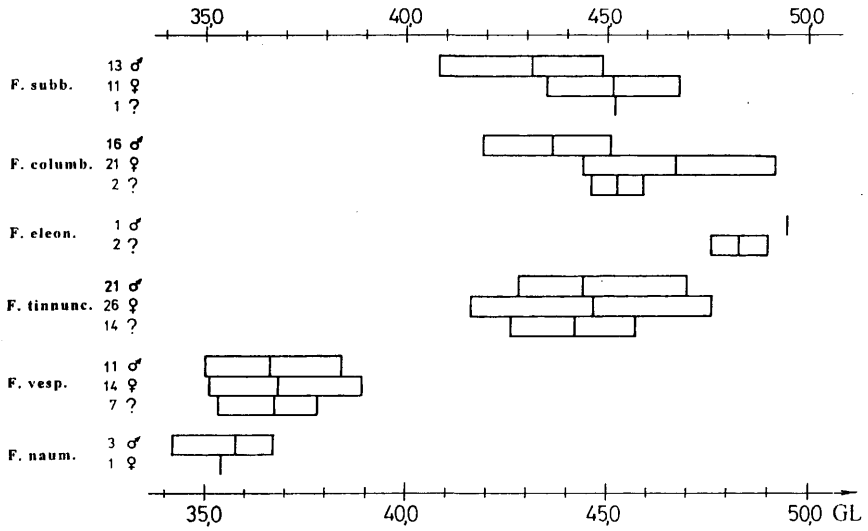
Plate XXI – Figure 1: Pelvis. ML = medial length (in mm). Figure 2: Pygostylus. GL = greatest length (in mm).



**Plate XXII – Figure 1:** Pelvis. ML = medial length, AW = the width at the antitrochanters (in mm). Over the broken line the pelvis is more square, while under it more elongated.



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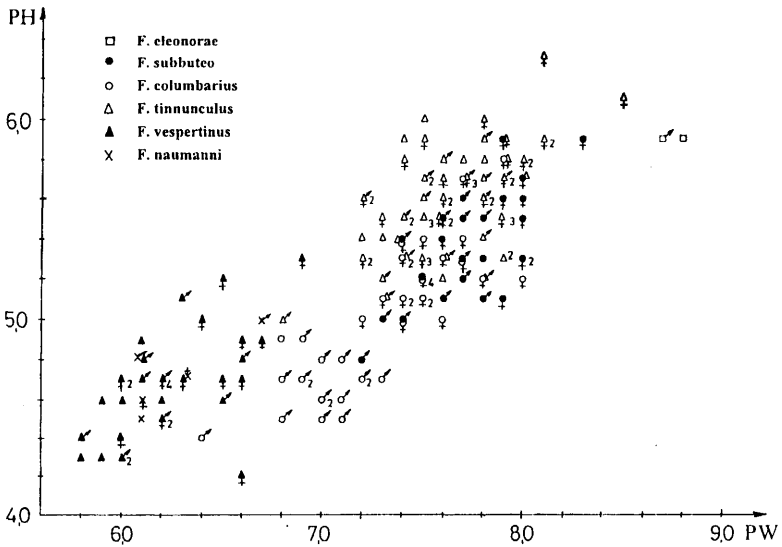
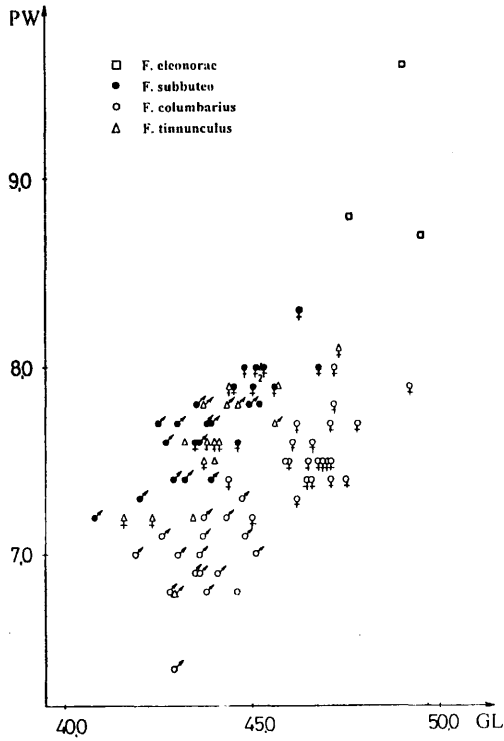


Plate XXIII - Figure 1: Femur. GL = greatest length (in mm). Figure 2: Femur. PW = proximal width, PH = proximal height (in mm).

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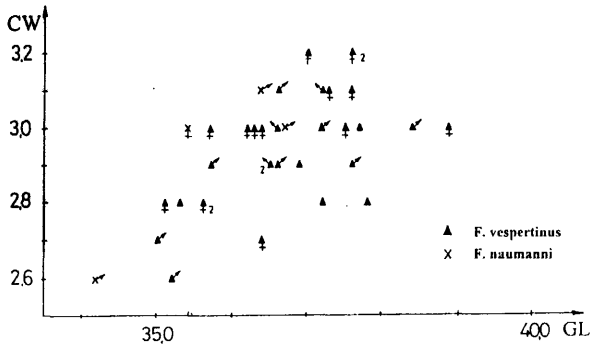
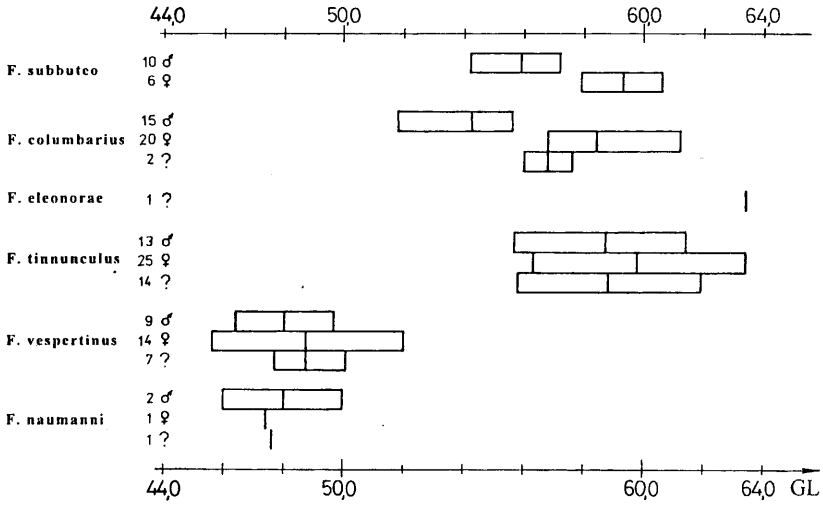


Plate XXIV – Figure 1: Femur. GL = greatest length, PW = proximal width (in mm). Figure 2: Femur. GL = greatest length, CW = the smallest width of the corpus femoris (in mm).

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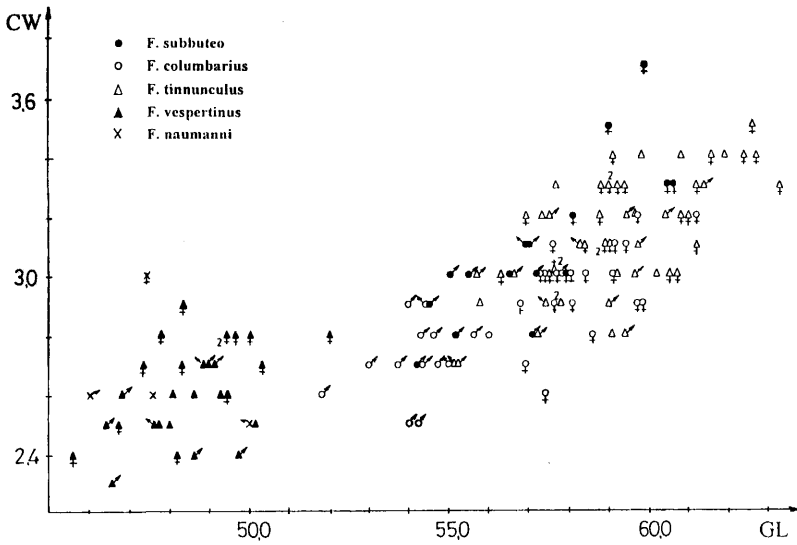
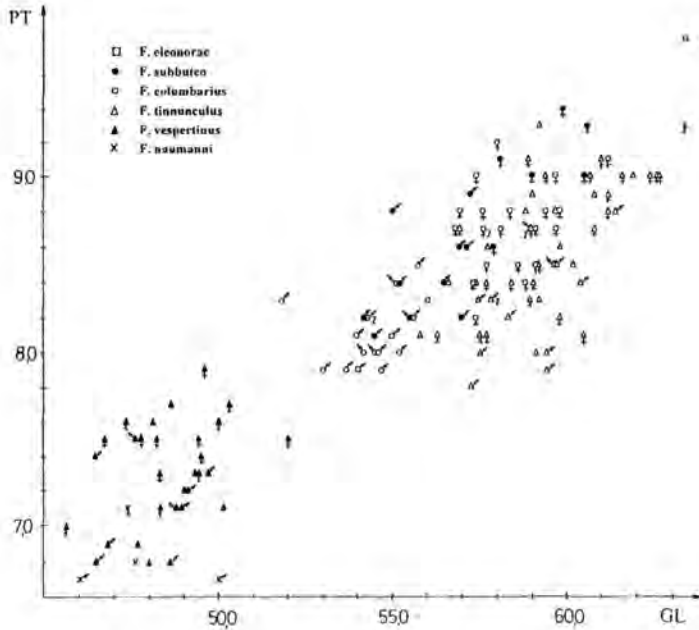
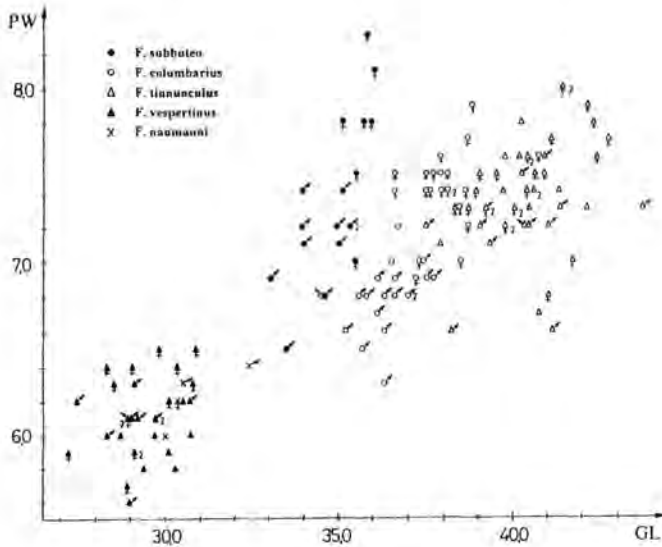


Plate XXV – Figure 1: Tibiotarsus. GL = greatest length (in mm). Figure 2: Tibiotarsus. GL = greatest length, CW = the smallest width of tibiotarsi (in mm).

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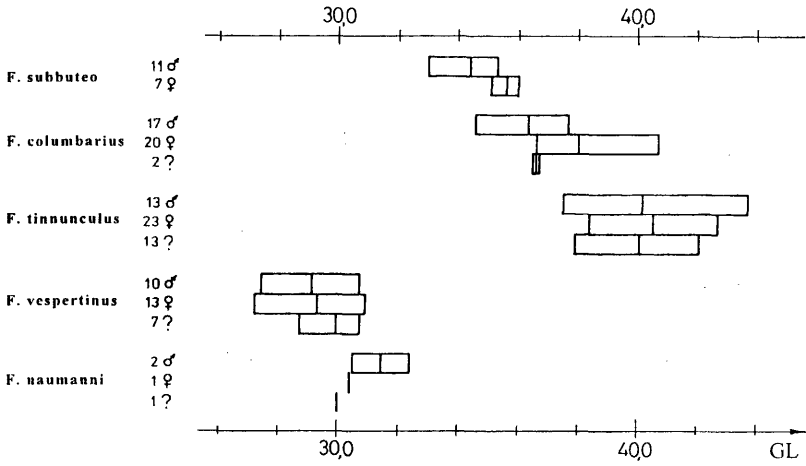


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**Plate XXVI – Figure 1:** Tibiotarsus. GL = greatest length, PT = the greatest transverse measure of the proximal end of the bone (in mm). **Figure 2:** Tarsometatarsus. GL = greatest length, PW = proximal width (in mm).

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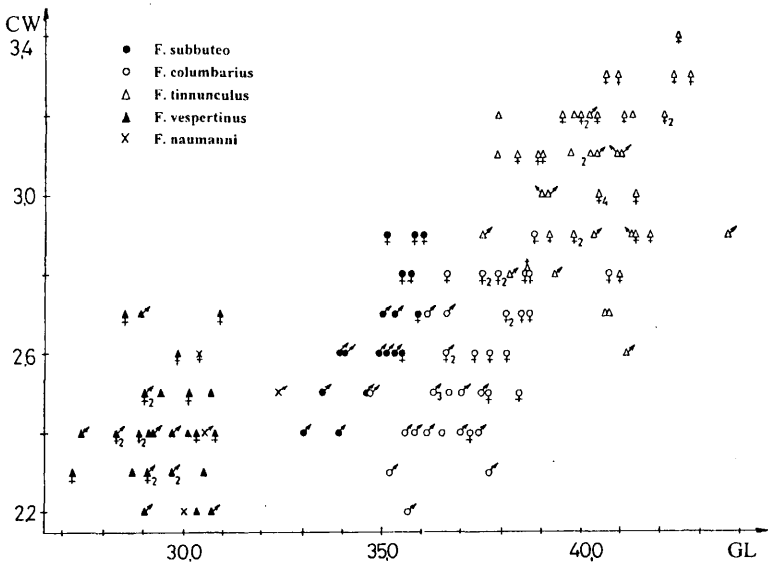
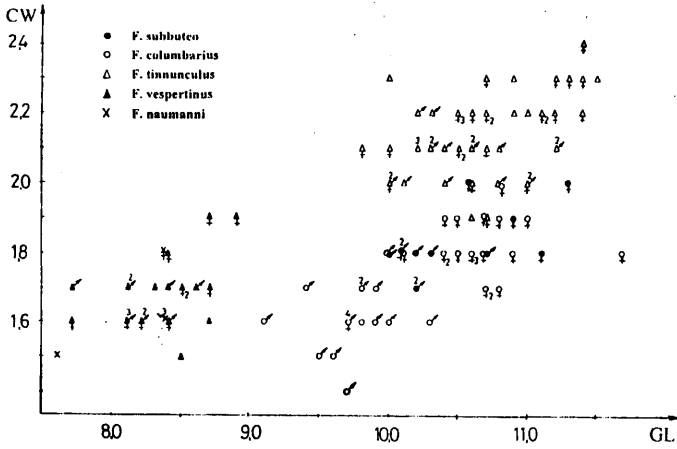
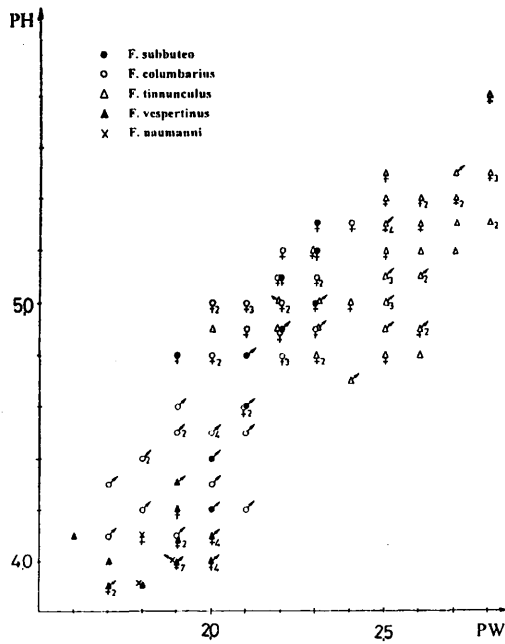


Plate XXVII – Figure 1: Tarsometatarsus. GL = greatest length (in mm). Figure 2: Tarsometatarsus. GL = greatest length, CW = the smallest width of corpus tarsometatarsi (in mm).

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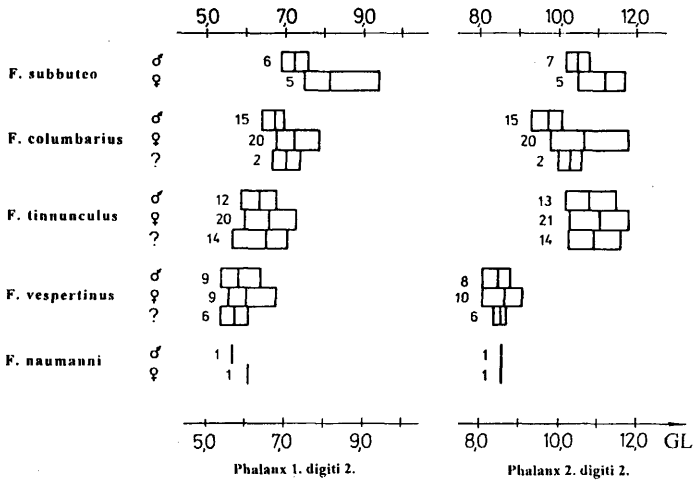


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**Plate XXVIII – Figure 1:** Phalanx 1 digiti 1 posterior. GL = greatest length, CW = the smallest width of corpus phalangis (in mm). **Figure 2:** Phalanx 2 digiti 2 posterior. PW = proximal width, PH = proximal height (in mm).

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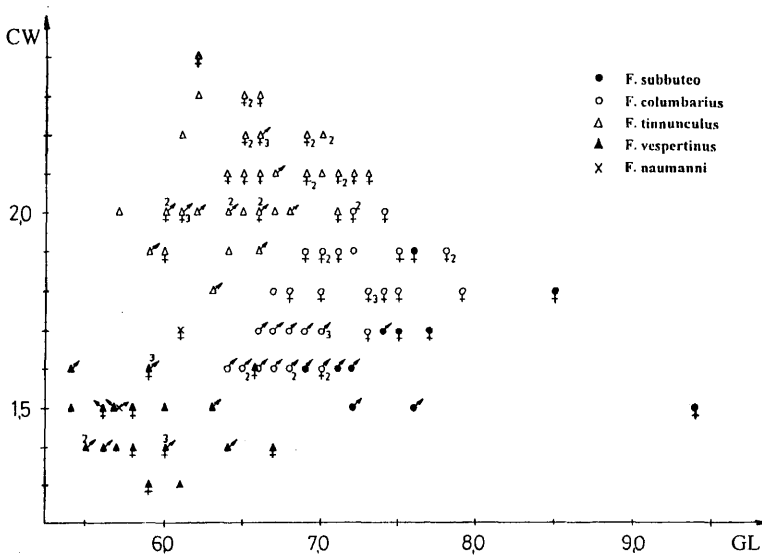
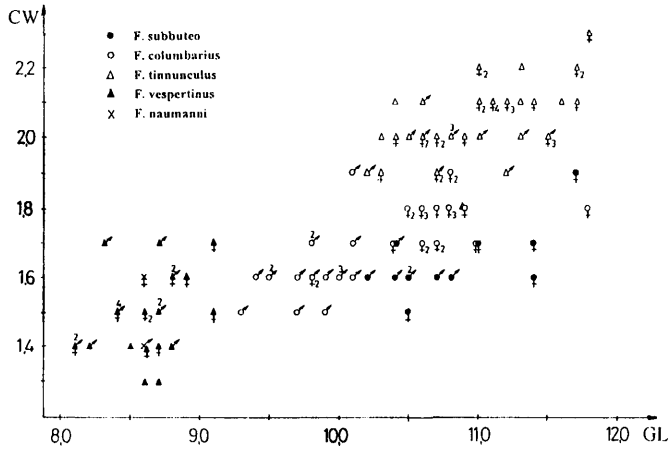
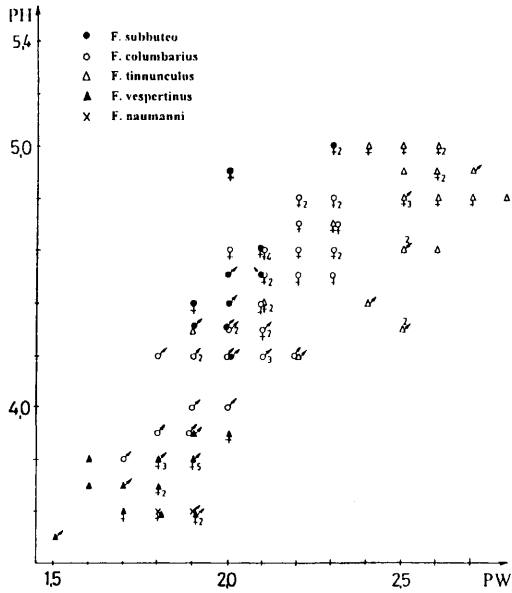


Plate XXIX – Figure 1: The phalanges of the second digit of the foot. GL = greatest length (in mm). Figure 2: Phalanx 1 digiti 2 posterior. GL = greatest length, CW = the width of corpus phalangis (in mm).

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**Plate XXX – Figure 1:** Phalanx 2 digiti 2 posterior. GL = greatest length, CW = the width of corpus phalangis (in mm). **Figure 2:** Phalanx 3 digiti 2 posterior. PW = proximal width, PH = proximal height (in mm).



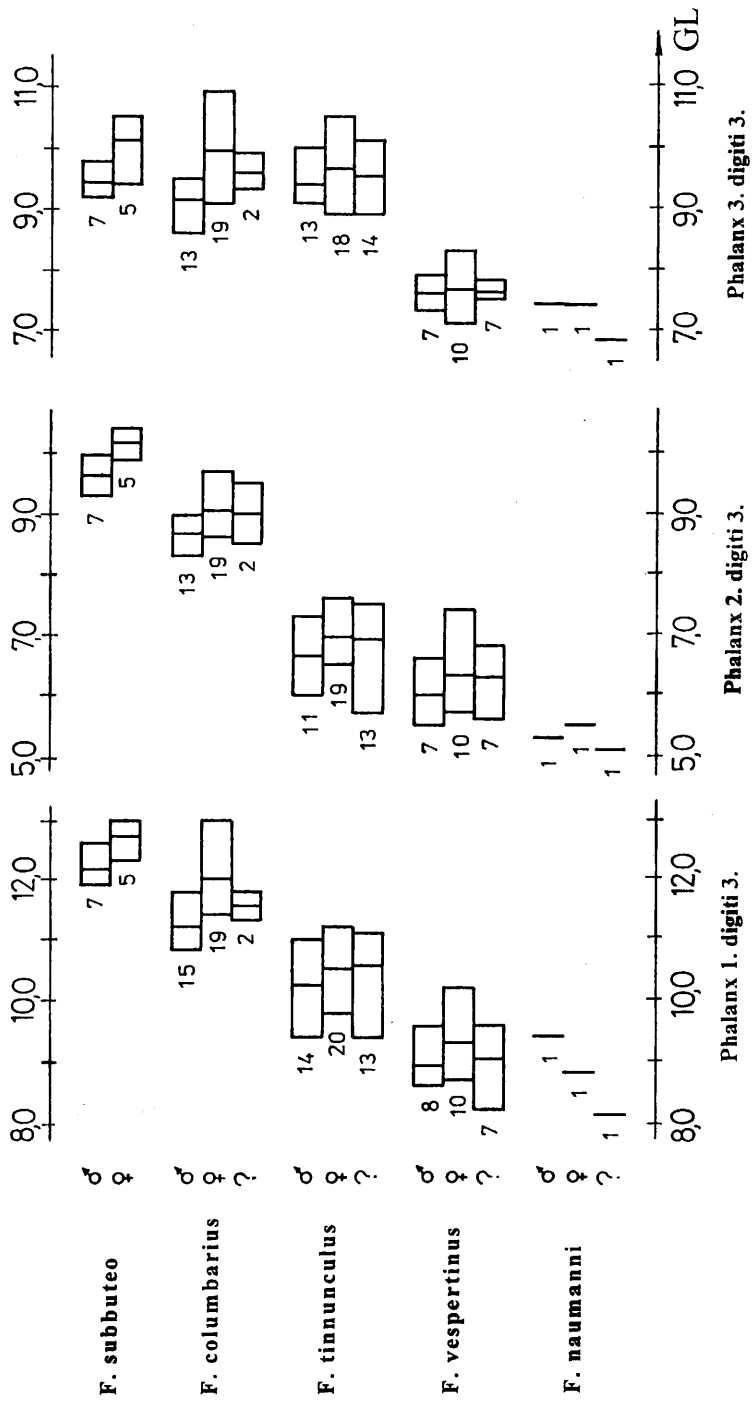
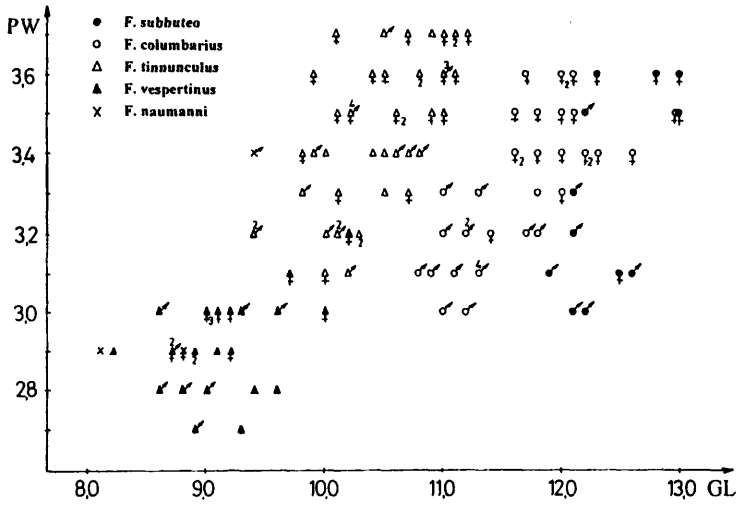
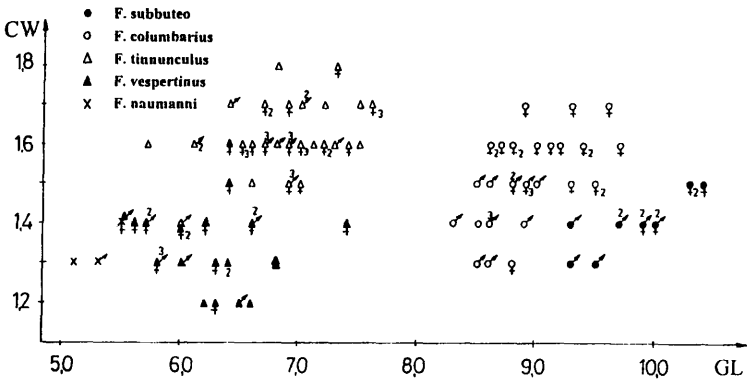


Plate XXXI - Figure 1: The phalanges of the third digit of the foot. GL = greatest length (in mm).

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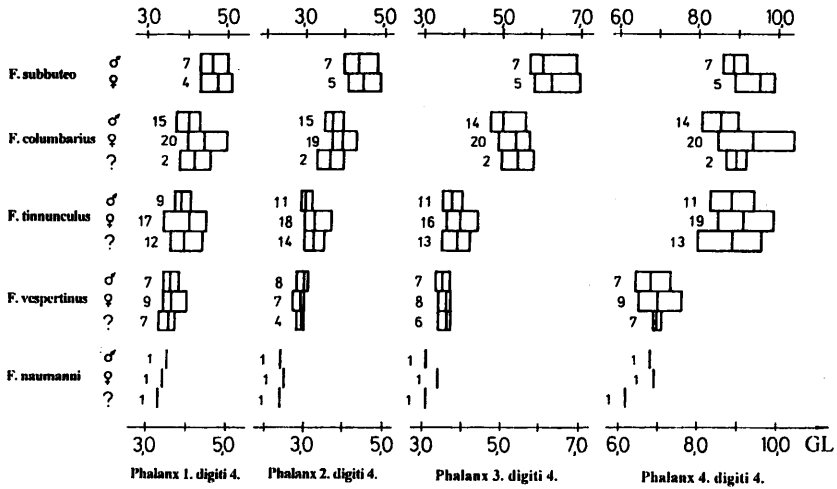


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**Plate XXXII – Figure 1:** Phalanx 1 digiti 3 posterior. GL = greatest length, PW = proximal width (in mm). **Figure 2:** Phalanx 2 digiti 3 posterior. GL = greatest length, CW = the smallest width of corpus phalangis (in mm).

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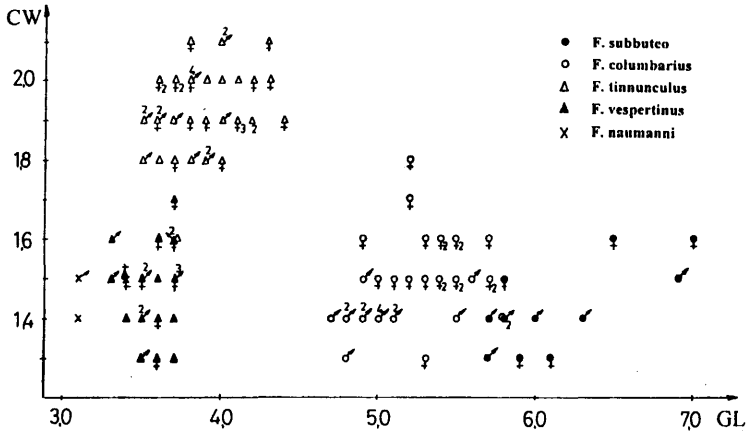
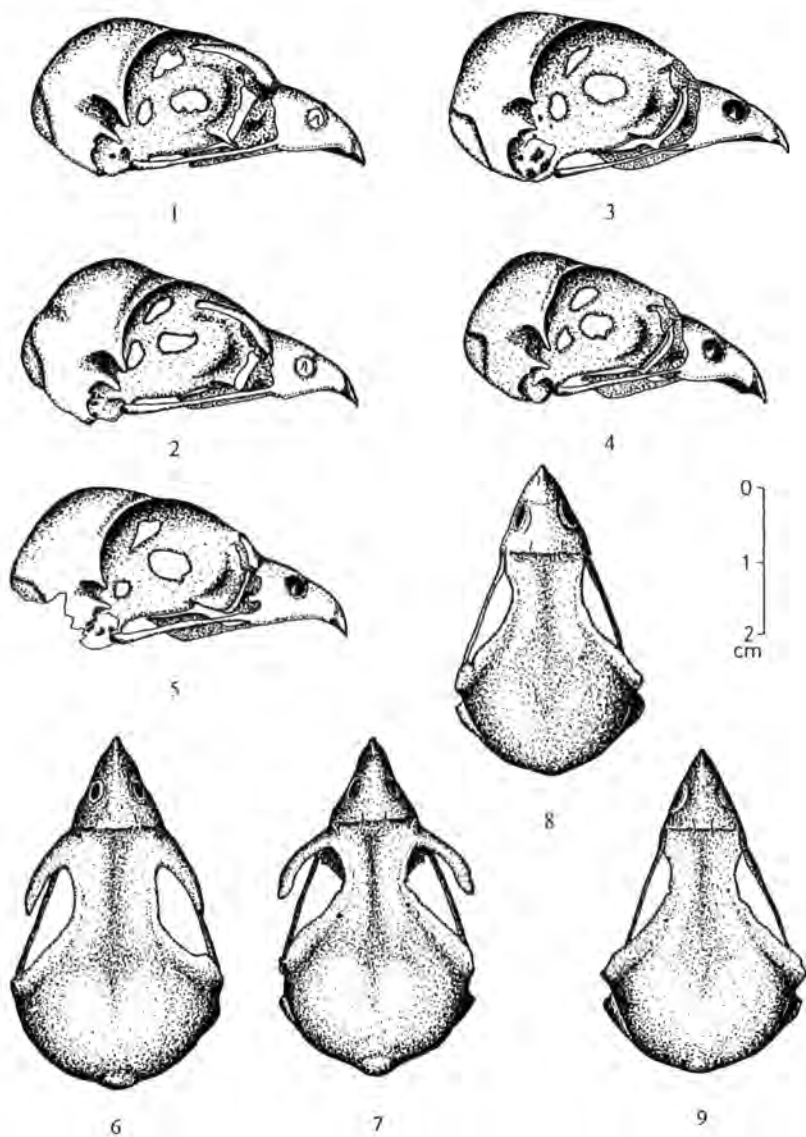
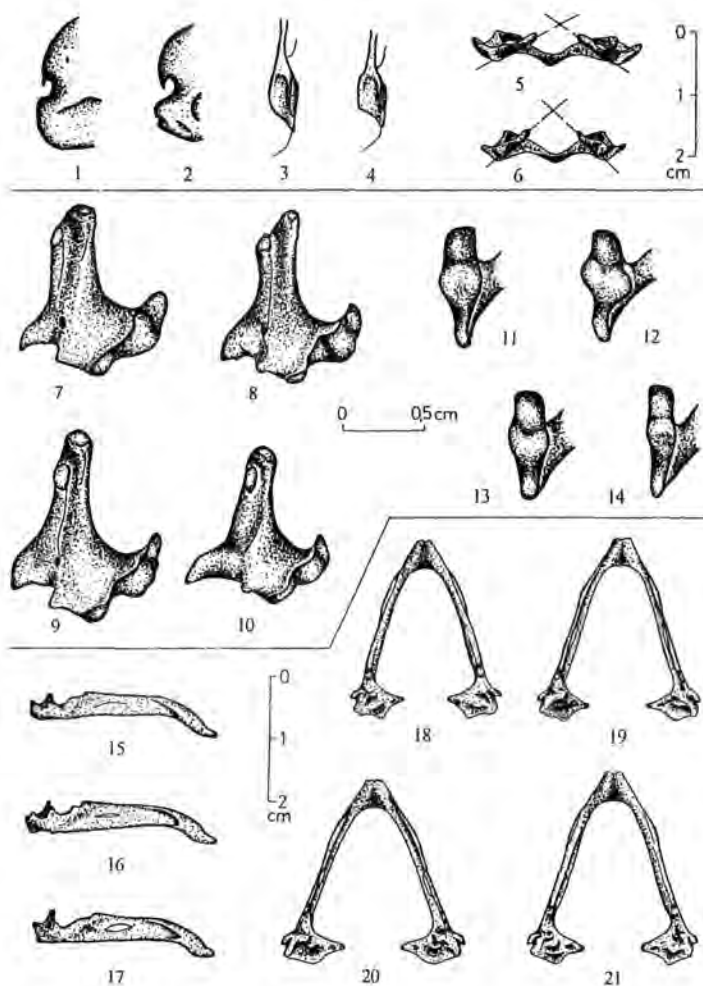


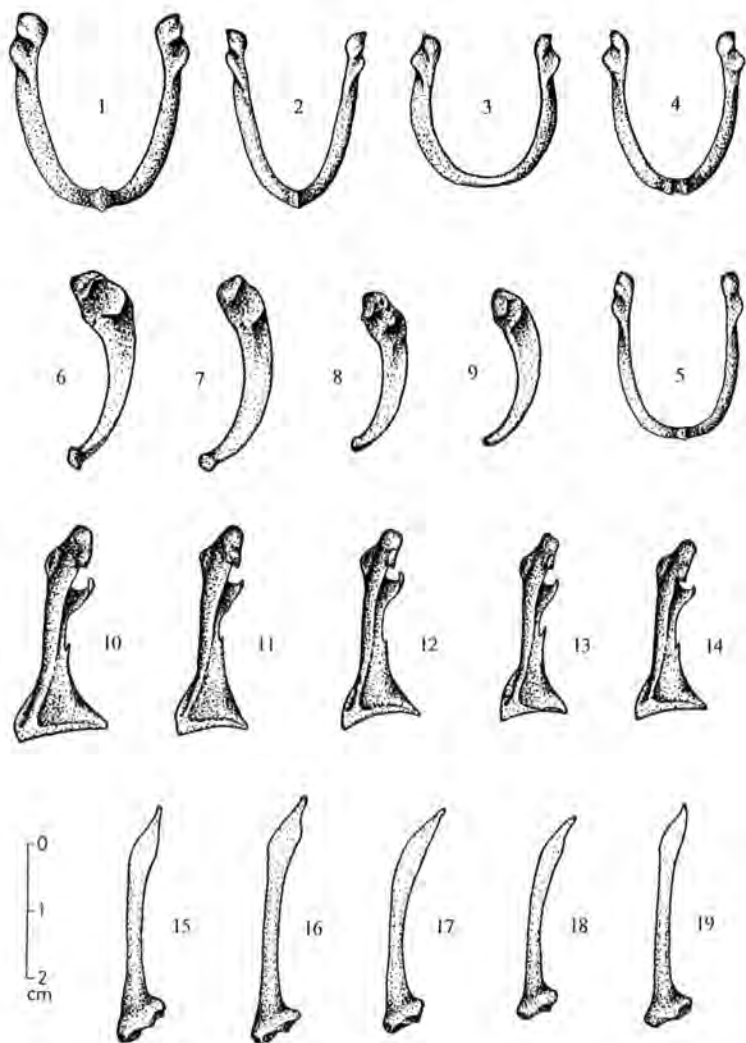
Plate XXXIII – Figure 1: The phalanges of the fourth digit of the foot. GL = greatest length (in mm). Figure 2: Phalanx 3 digiti 4 posterior. GL = greatest length, CW = the smallest width of corpus phalangis (in mm).



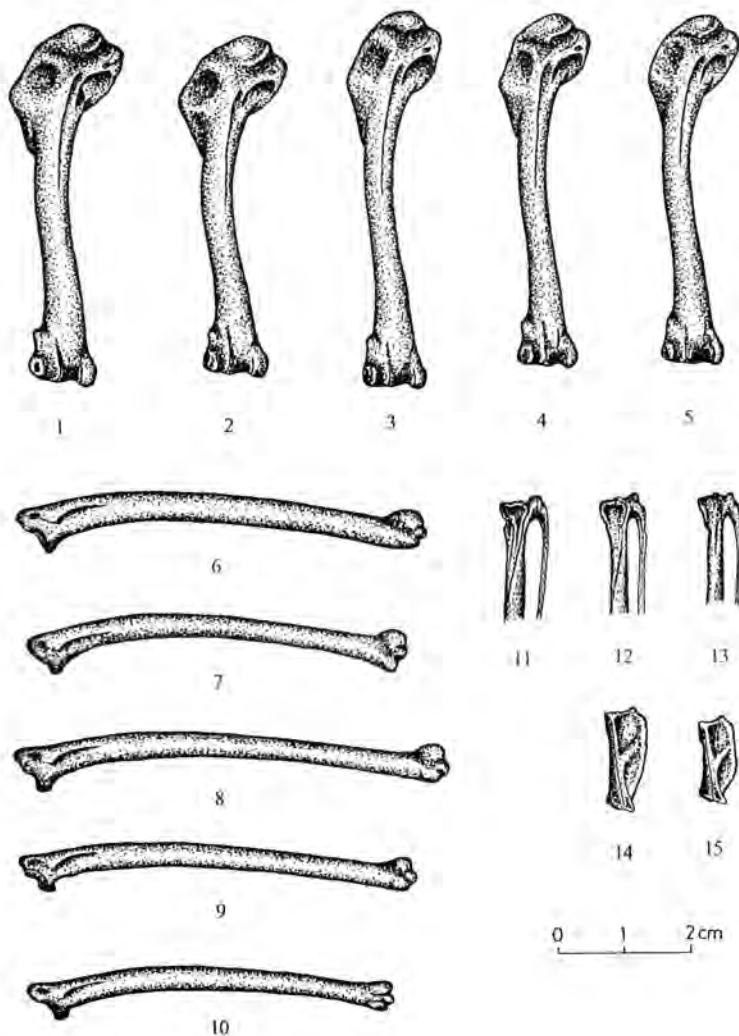
**Plate XXXIV** – **Figures 1-5:** cranium, lateral view, **1** = *F. subbuteo* ♂, **2** = *F. columbarius* ♀, **3** = *F. tinnunculus* ♀, **4** = *F. vespertinus* ♀, **5** = *F. naumanni* – **Figures 6-9:** cranium, frontal view, **6** = *F. subbuteo*, **7** = *F. columbarius* ♀, **8** = *F. vespertinus* ♀, **9** = *F. tinnunculus* ♀



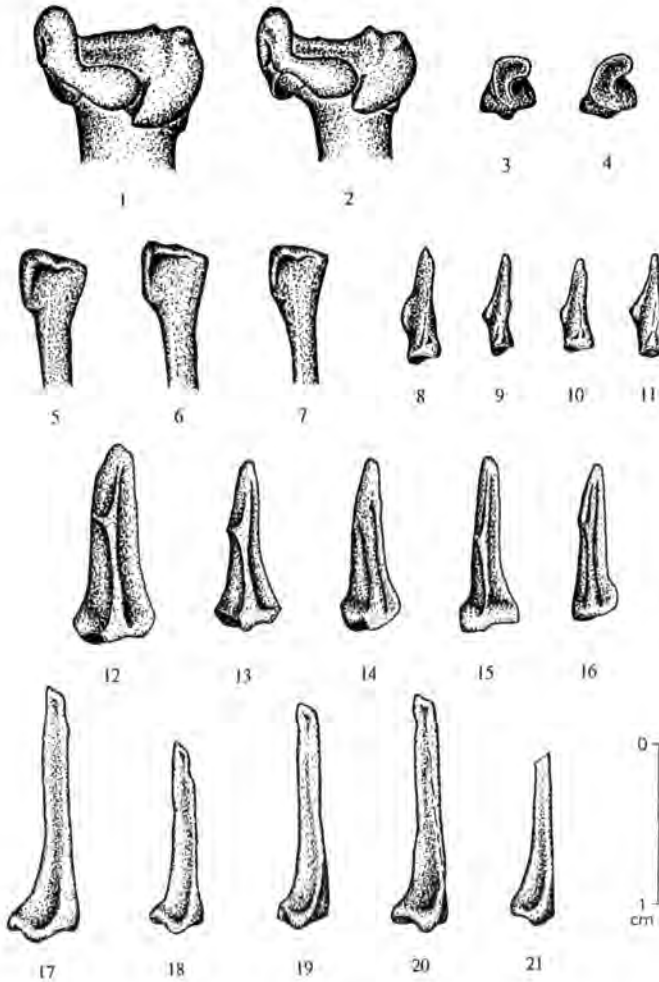
**Plate XXXV** – **Figures 1-2:** cranium, caudal view, 1 = *F. tinnunculus* ♀, 2 = *F. vespertinus* ♂ – **Figures 3-4:** os palatinum, ventral view, 3 = *F. tinnunculus* ♀, 4 = *F. vespertinus* ♀, – **Figures 5-6:** mandibula, caudal view, 5 = *F. tinnunculus* ♀, 6 = *F. vespertinus* ♀ – **Figures 7-10:** quadratum, caudo-medial view, 7 = *F. subbuteo* ♀, 8 = *F. columbarius* ♀, 9 = *F. tinnunculus* ♀, 10 = *F. vespertinus* ♀ – **Figures 11-14:** quadratum, the articular surface of processus mandibularis, 11 = *F. subbuteo*, 12 = *F. columbarius* ♀, 13 = *F. tinnunculus* ♀, 14 = *F. vespertinus* – **Figures 15-17:** mandibula, lateral view, 15 = *F. columbarius* ♀, 16 = *F. tinnunculus* ♀, 17 = *F. vespertinus* ♀ – **Figures 18-21:** mandibula, dorsal view, 18 = *F. subbuteo* ♂, 19 = *F. columbarius* ♀, 20 = *F. tinnunculus* ♀, 21 = *F. vespertinus* ♀.



**Plate XXXVI** – **Figures 1-5:** clavícula (fúrcula), dorso-caudal view **1** = *F. subbuteo* ♀, **2** = *F. columbarius* ♀, **3** = *F. tinnunculus* ♀, **4** = *F. vespertinus* ♀, **5** = *F. naumanni* – **Figures 6-9:** clavícula, lateral view, **6** = *F. subbuteo*, **7** = *F. columbarius*, **8** = *F. vespertinus* ♀, **9** = *F. tinnunculus* ♂ – **Figures 10-14:** coracoideum, ventral view, **10** = *F. subbuteo* ♀, **11** = *F. columbarius* ♀, **12** = *F. tinnunculus* ♀, **13** = *F. vespertinus* ♀, **14** = *F. naumanni* – **Figures 15-19:** scapula, costal view, **15** = *F. subbuteo* ♀, **16** = *F. columbarius* ♀, **17** = *F. tinnunculus* ♀, **18** = *F. vespertinus* ♂, **19** = *F. naumanni*.

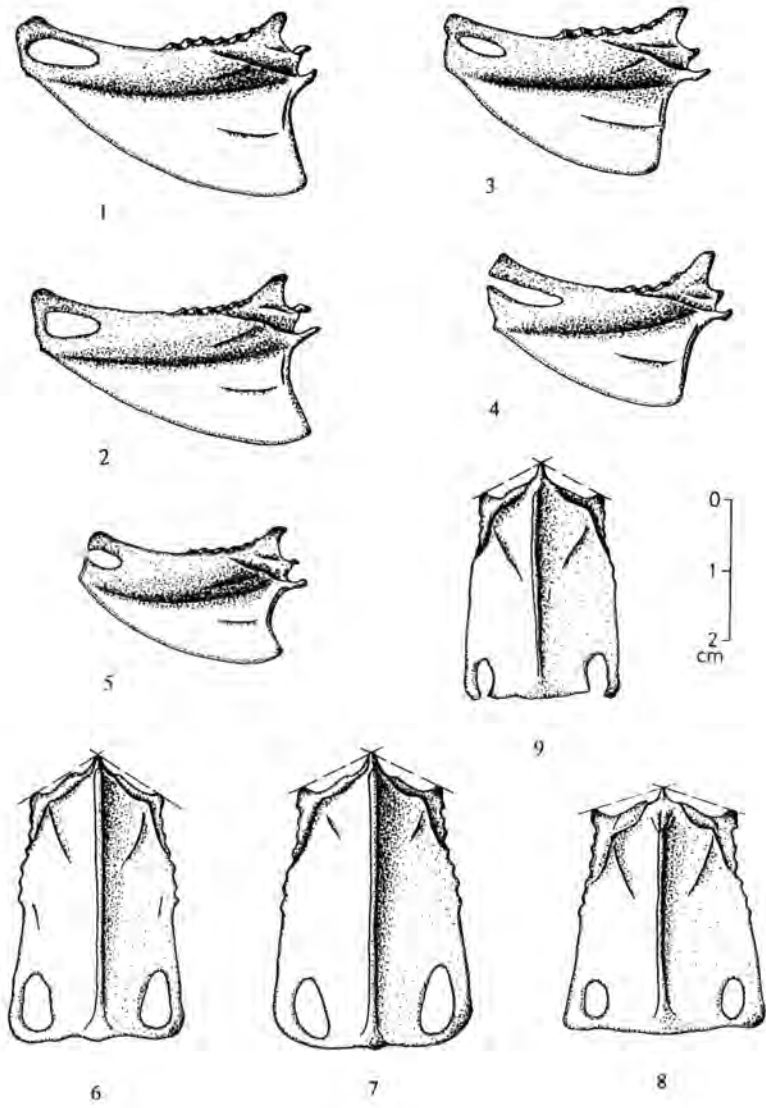


**Plate XXXVII** – **Figures 1-5:** humerus, caudal view, **1** = *F. subbuteo*, **2** = *F. columbarius* ♀, **3** = *F. tinnunculus* ♀, **4** = *F. vespertinus* ♀, **5** = *F. naumanni* – **Figures 6-10:** ulna, ventral view, **6** = *F. subbuteo*, **7** = *F. columbarius* ♀, **8** = *F. tinnunculus* ♀, **9** = *F. vespertinus* ♀, **10** = *F. naumanni* – **Figures 11-13:** carpometacarpus, dorsal view, **11** = *F. subbuteo*, **12** = *F. tinnunculus* ♀, **13** = *F. vespertinus* ♀ – **Figures 14-15:** phalanx 1 digiti 2 anterior, dorsal view, **14** = *F. tinnunculus*, **15** = *F. vespertinus*.

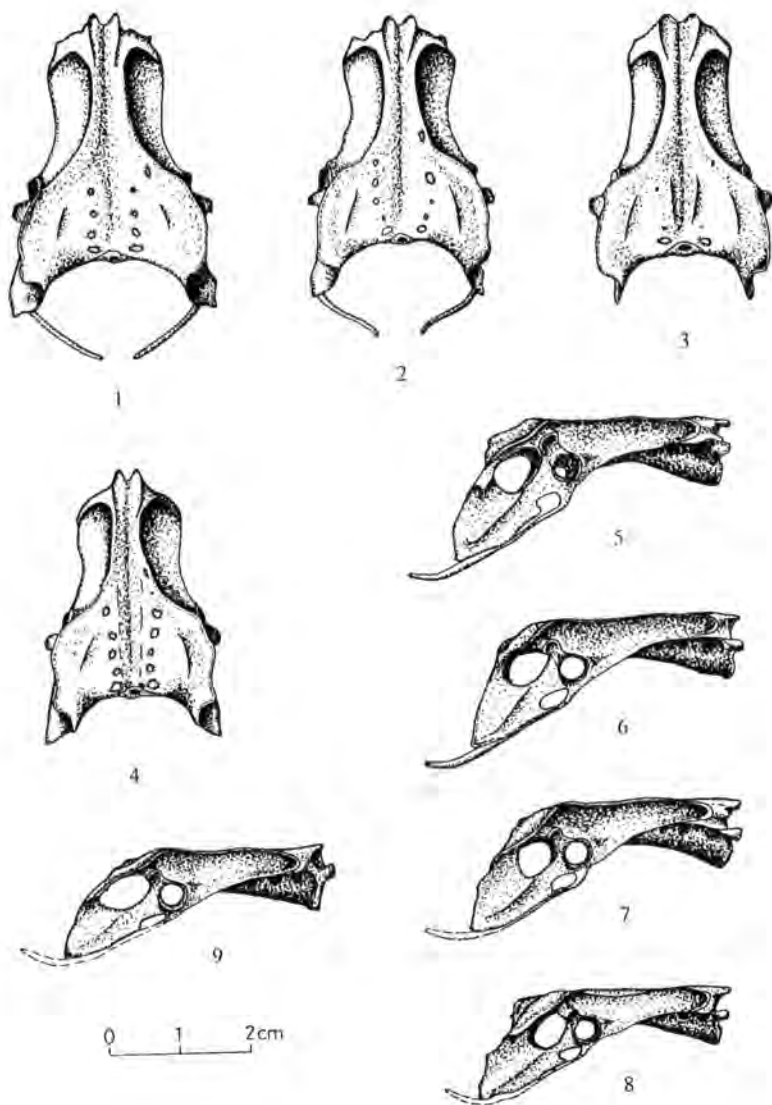


**Plate XXXVIII** – **Figures 1-2:** humerus, distal end of the bone, cranial view, 1 = *F. subbuteo* ♀, 2 = *F. columbarius* ♀ – **Figures 3-4:** phalanx 1 digiti 2 anterior, proximal end of the bone, proximal view, 3 = *F. columbarius* ♀, 4 = *F. tinnunculus* ♀ – **Figures 5-7:** radius, distal end of the bone, ventro-caudal view, 5 = *F. columbarius* ♀, 6 = *F. tinnunculus*, 7 = *F. vespertinus* ♀ – **Figures 8-11:** phalanx 1 digiti 3 anterior, ventral view, 8 = *F. subbuteo* ♀, 9 = *F. columbarius* ♀, 10 = *F. tinnunculus* ♀, 11 = *F. vespertinus* ♀ – **Figures 12-16:** phalanx 1 digiti 1 anterior, dorsal view, 12 = *F. subbuteo* ♀, 13 = *F. columbarius* ♀, 14 = *F. tinnunculus* ♀, 15 = *F. vespertinus* ♀, 16 = *F. naumanni* – **Figures 17-21:** phalanx 2 digiti 2 anterior, caudal view, 17 = *F. subbuteo* ♀, 18 = *F. columbarius* ♀, 19 = *F. tinnunculus* ♀, 20 = *F. vespertinus* ♀, 21 = *F. naumanni*.

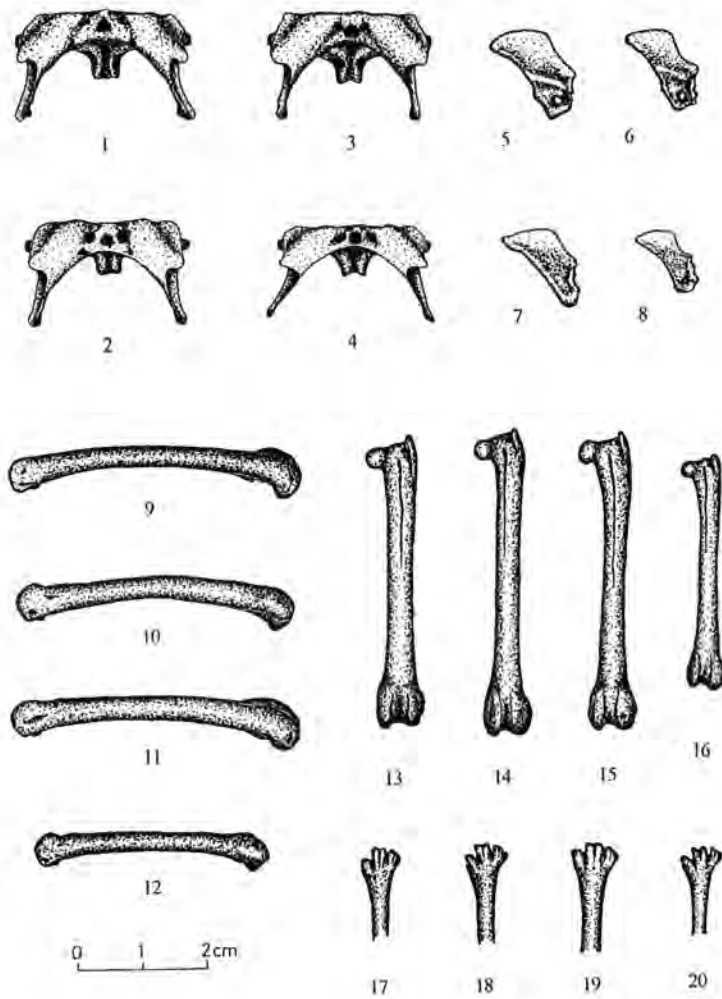




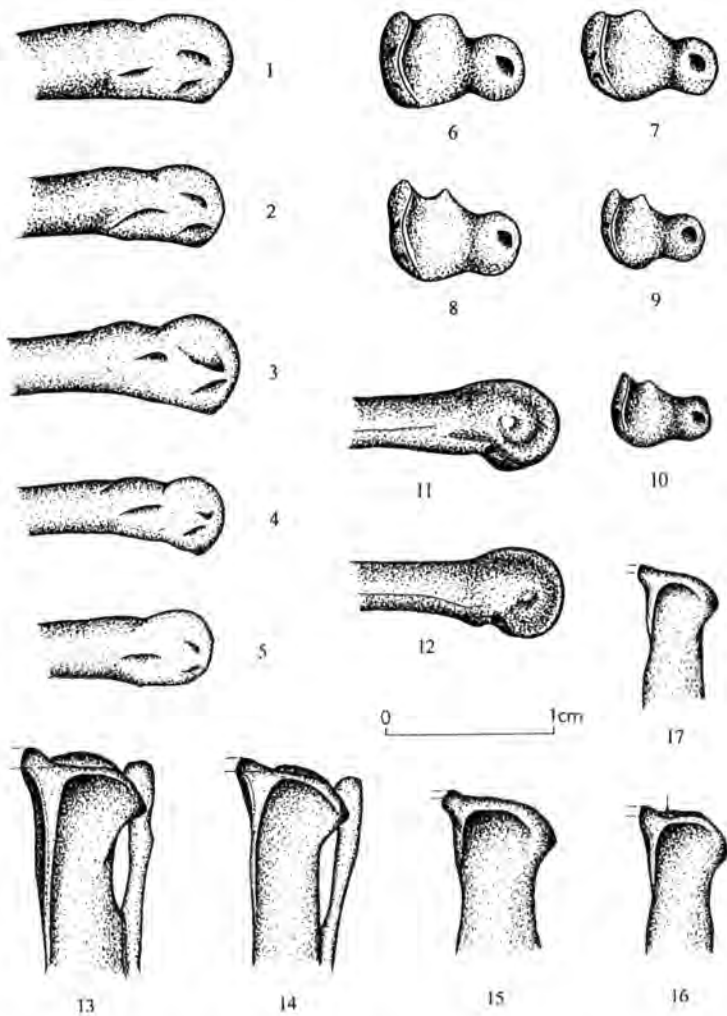
**Plate XXXIX** - **Figures 1-5:** sternum, lateral view, **1** = *F. subbuteo*, **2** = *F. columbarius*, **3** = *F. tinnunculus* ♀, **4** = *F. naumanni*, **5** = *F. vespertinus* ♂ - **Figures 6-9:** sternum, ventral view, **6** = *F. subbuteo* ♂, **7** = *F. columbarius* ♀, **8** = *F. tinnunculus* ♂, **9** = *F. vespertinus* ♂.



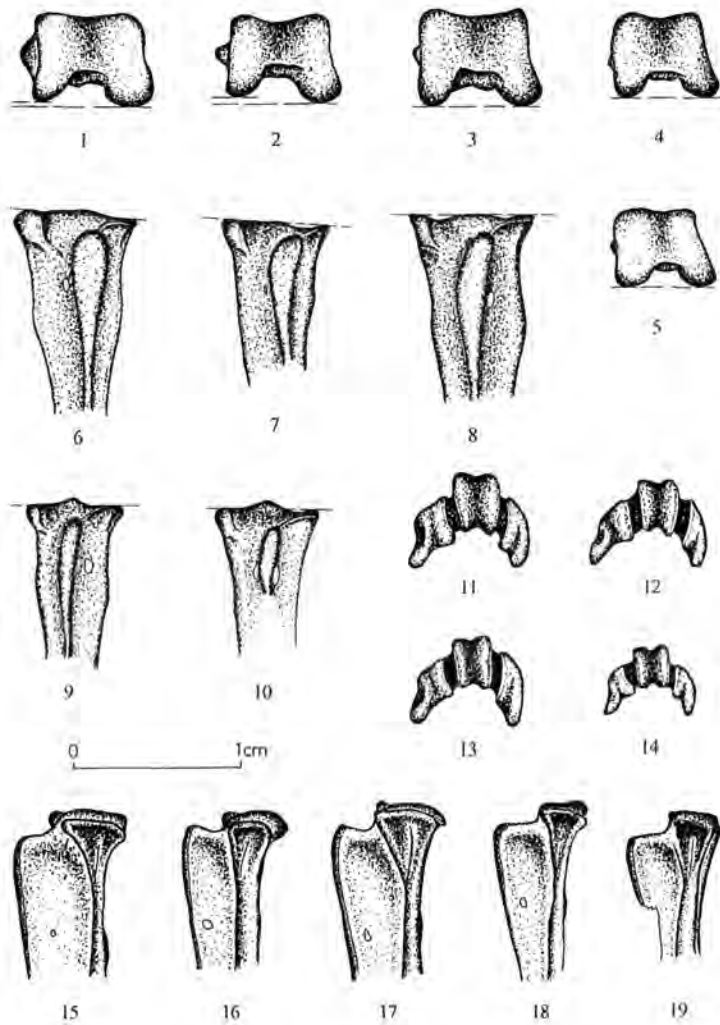
**Plate XL** – Figures 1-4: pelvis, dorsal view, 1 = *F. subbuteo* ♀, 2 = *F. columbarius* ♀, 3 = *F. tinnunculus* ♀, 4 = *F. vespertinus* ♀ – Figures 5-9: pelvis, lateral view, 5 = *F. subbuteo* ♀, 6 = *F. columbarius* ♀, 7 = *F. tinnunculus* ♀, 8 = *F. vespertinus* ♀, 9 = *F. naumanni*.



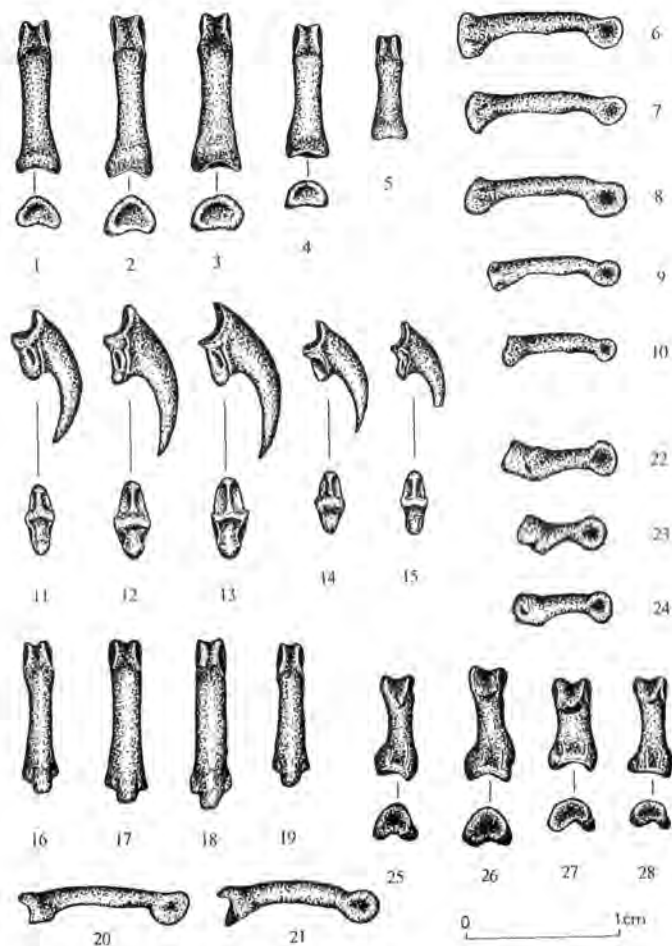
**Plate XLI** – **Figures 1-4:** pelvis, caudal view, **1** = *F. subbuteo* ♀, **2** = *F. columbarius* ♀, **3** = *F. tinnunculus* ♀, **4** = *F. vesperinus* ♀ – **Figures 5-8:** pygostylus, lateral view, **5** = *F. subbuteo* ♀, **6** = *F. columbarius*, **7** = *F. tinnunculus* ♂, **8** = *F. vesperinus* ♂ – **Figures 9-12:** femur, lateral view, **9** = *F. columbarius* ♂, **10** = *F. tinnunculus* ♂, **11** = *F. subbuteo* ♀, **12** = *F. vesperinus* ♂ – **Figures 13-16:** femur, cranial view, **13** = *F. subbuteo* ♀, **14** = *F. columbarius* ♀, **15** = *F. tinnunculus* ♀, **16** = *F. vesperinus* ♀ – **Figures 17-20:** tarsometatarsus, distal end of the bone, dorsal view, **17** = *F. subbuteo* ♂, **18** = *F. columbarius* ♀, **19** = *F. tinnunculus*, **20** = *F. vesperinus*.



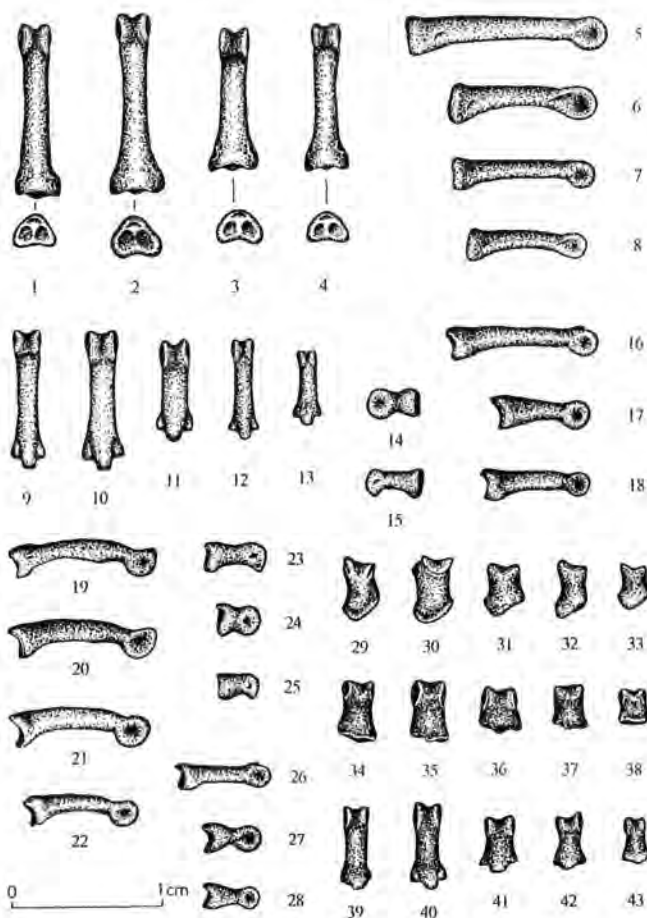
**Plate XLII** – **Figures 1-5:** femur, proximal end of the bone, lateral view, **1** = *F. subbuteo* ♀, **2** = *F. columbarius* ♀, **3** = *F. tinnunculus* ♀, **4** = *F. vespertinus*, **5** = *F. naumanni* – **Figures 6-10:** femur, proximal end of the bone, proximal view, **6** = *F. subbuteo* ♀, **7** = *F. columbarius* ♀, **8** = *F. tinnunculus*, **9** = *F. vespertinus*, **10** = *F. naumanni* – **Figures 11-12:** tibiotarsus, distal end of the bone, lateral view, **11** = *F. subbuteo* ♀, **12** = *F. tinnunculus* ♀ – **Figures 13-17:** tibiotarsus, proximal end of the bone, cranial view, **13** = *F. subbuteo* ♀, **14** = *F. columbarius* ♀, **15** = *F. tinnunculus* ♀, **16** = *F. vespertinus* ♀, **17** = *F. naumanni*.



**Plate XLIII** – **Figures 1-5:** tibiotarsus, distal end ♀ of the bone, distal view, **1** = *F. subbuteo* ♀, **2** = *F. columbarius* ♀, **3** = *F. tinnunculus* ♀, **4** = *F. vespertinus* ♀, **5** = *F. naumanni* – **Figures 6-10:** tarsometatarsus, proximal end ♀ of the bone, plantar view, **6** = *F. subbuteo* ♀, **7** = *F. columbarius* ♀, **8** = *F. tinnunculus* ♀, **9** = *F. vespertinus* ♂, **10** = *F. naumanni* – **Figures 11-14:** tarsometatarsus, distal end ♀ of the bone, distal view, **11** = *F. subbuteo* ♀, **12** = *F. columbarius* ♀, **13** = *F. tinnunculus* ♀, **14** = *F. vespertinus* ♂ – **Figures 15-19:** tarsometatarsus, proximal end ♀ of the bone, medial view, **15** = *F. subbuteo* ♀, **16** = *F. columbarius*, **17** = *F. tinnunculus* ♀, **18** = *F. vespertinus* ♂, **19** = *F. naumanni*.



**Plate XLIV** – **Figures 1-5:** phalanx 1 digiti 1 posterior, dorsal and proximal view, 1 = *F. subbuteo* ♂, 2 = *F. columbarius* ♀, 3 = *F. tinnunculus* ♀, 4 = *F. vespertinus* ♀, 5 = *F. naumanni* – **Figures 6-10:** phalanx 1 digiti 1 posterior, lateral view, 6 = *F. subbuteo* ♂, 7 = *F. columbarius* ♀, 8 = *F. tinnunculus* ♀, 9 = *F. vespertinus* ♀, 10 = *F. naumanni* – **Figures 11-15:** phalanx 2 digiti 1 posterior, lateral and proximal view, 11 = *F. subbuteo* ♂, 12 = *F. columbarius* ♀, 13 = *F. tinnunculus* ♀, 14 = *F. vespertinus* ♀, 15 = *F. naumanni* – **Figures 16-19:** phalanx 2 digiti 2 posterior, dorsal view, 16 = *F. subbuteo* ♂, 17 = *F. columbarius* ♀, 18 = *F. tinnunculus* ♀, 19 = *F. vespertinus* – **Figures 20-21:** phalanx 2 digiti 2 posterior, lateral view, 20 = *F. subbuteo* ♂, 21 = *F. tinnunculus* ♀ – **Figures 22-24:** phalanx 1 digiti 2 posterior, medial view, 22 = *F. subbuteo* ♀, 23 = *F. tinnunculus* ♀, 24 = *F. vespertinus* – **Figures 25-28:** phalanx 1 digiti 2 posterior, dorsal and proximal view, 25 = *F. subbuteo* ♂, 26 = *F. columbarius* ♀, 27 = *F. tinnunculus* ♀, 28 = *F. vespertinus* ♀.



**Plate XLV** – **Figures 1-4:** phalanx 1 digiti 3 posterior, dorsal and proximal view, **1** = *F. subbuteo* ♂, **2** = *F. columbarius* ♀, **3** = *F. tinnunculus* ♀, **4** = *F. vespertinus* – **Figures 5-8:** phalanx 1 digiti 3 posterior, medial view, **5** = *F. subbuteo* ♀, **6** = *F. tinnunculus* ♀, **7** = *F. vespertinus* ♀, **8** = *F. naumanni* – **Figures 9-13:** phalanx 2 digiti 3 posterior, dorsal view, **9** = *F. subbuteo* ♂, **10** = *F. columbarius* ♀, **11** = *F. tinnunculus* ♀ **12** = *F. vespertinus* ♀, **13** = *F. naumanni* – **Figures 14-15:** phalanx 1 digiti 4 posterior, medial view, **14** = *F. tinnunculus* ♀, **15** = *F. vespertinus* ♀ – **Figures 16-18:** phalanx 2 digiti 3 posterior, medial view, **16** = *F. subbuteo* ♀, **17** = *F. tinnunculus* ♀, **18** = *F. vespertinus* ♀ – **Figures 19-22:** phalanx 3 digiti 3 posterior, lateral view, **19** = *F. subbuteo* ♂, **20** = *F. columbarius* ♀, **21** = *F. tinnunculus* ♀, **22** = *F. vespertinus* ♀ – **Figures 23-25:** phalanx 2 digiti 4 posterior, medial view, **23** = *F. subbuteo* ♂, **24** = *F. tinnunculus* ♀, **25** = *F. vespertinus* ♀ – **Figures 26-28:** phalanx 3 digiti 4 posterior, medial view, **26** = *F. subbuteo* ♀, **27** = *F. tinnunculus* ♀, **28** = *F. vespertinus* ♀ – **Figures 29-33:** phalanx 1 digiti 4 posterior, dorsal view, **29** = *F. subbuteo* ♂, **30** = *F. columbarius* ♀, **31** = *F. tinnunculus* ♀, **32** = *F. vespertinus* ♀, **33** = *F. naumanni* – **Figures 34-38:** phalanx 2 digiti 4 posterior, dorsal view, **34** = *F. subbuteo* ♂, **35** = *F. columbarius* ♀, **36** = *F. tinnunculus* ♀, **37** = *F. vespertinus* ♀, **38** = *F. naumanni* – **Figures 39-43:** phalanx 3 digiti 4 posterior, dorsal view, **39** = *F. subbuteo* ♂, **40** = *F. columbarius* ♀, **41** = *F. tinnunculus* ♀, **42** = *F. vespertinus* ♀, **43** = *F. naumanni*.





**TABLES OF MEASUREMENTS**  
(TABLES 1–33)



*Falco subbuteo – Cranium*

Table 1

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	9	45,7	48,4	46,90	0,81	1,72	0,66
CL	10	32,0	34,3	32,82	0,65	1,98	0,42
RL	10	16,8	18,3	17,63	0,55	3,11	0,30
BL	9	6,5	7,9	7,44	0,40	5,38	0,16
GW	10	27,5	29,7	28,48	0,59	2,07	0,35
TW	8	27,0	29,1	27,70	0,70	2,53	0,49
FW	10	21,2	22,5	22,00	0,43	1,95	0,18
MW	10	8,2	11,4	10,22	0,99	9,72	0,98
SW	8	22,7	25,8	24,29	0,99	4,07	0,98
GH	9	20,0	21,6	20,90	0,42	2,03	0,18

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	5	48,9	51,1	49,94	0,99	1,98	0,98
CL	6	34,0	35,0	34,55	0,38	1,11	0,14
RL	6	18,6	20,1	19,37	0,58	2,99	0,34
BL	8	7,3	8,2	7,96	0,29	3,67	0,08
GW	4	29,4	30,4	29,87	0,41	1,38	0,17
TW	7	28,0	29,4	28,84	0,48	1,67	0,23
FW	7	22,2	24,2	23,07	0,74	3,22	0,55
MW	7	9,3	11,5	10,67	0,73	6,86	0,53
SW	4	23,8	25,9	25,12	0,93	3,70	0,86
GH	7	21,4	22,3	22,03	0,31	1,40	0,10

*Falco columbarius – Cranium*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	14	43,7	46,5	45,04	0,88	1,95	0,77
CL	14	30,9	33,3	32,15	0,68	2,11	0,46
RL	14	15,2	17,5	16,80	0,57	3,37	0,32
BL	13	6,4	7,9	6,98	0,39	5,57	0,15
GW	13	26,0	28,4	26,95	0,67	2,49	0,45
TW	14	25,7	27,3	26,50	0,48	1,82	0,23
FW	14	20,8	22,3	21,56	0,45	2,09	0,20
MW	14	7,0	9,4	8,29	0,68	8,26	0,46
SW	7	23,3	25,6	24,47	0,81	3,30	0,66
GH	13	20,2	21,2	20,65	0,29	1,41	0,08

*Falco columbarius – Cranium*

Table 1

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	17	46,1	48,2	47,26	0,63	1,34	0,40
CL	17	32,3	34,1	33,19	0,55	1,65	0,30
RL	19	17,1	19,4	18,44	0,53	2,89	0,28
BL	18	7,1	8,1	7,52	0,30	3,96	0,09
GW	15	26,8	28,8	27,73	0,49	1,78	0,24
TW	15	26,7	28,1	27,47	0,48	1,76	0,23
FW	16	21,2	23,1	22,31	0,47	2,11	0,22
MW	18	8,0	10,1	9,02	0,75	8,33	0,56
SW	9	23,8	26,5	25,12	1,03	4,10	1,06
GH	16	20,8	21,9	21,29	0,33	1,53	0,11

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	3	45,7	46,8	46,17	0,57	1,23	0,32
CL	3	31,8	32,2	32,00	0,20	0,62	0,04
RL	3	16,8	18,9	17,80	1,05	5,92	1,10
BL	4	6,6	7,5	7,12	0,41	5,77	0,17
GW	2	27,5	27,7	27,60	–	–	–
TW	2	25,6	26,8	26,20	–	–	–
FW	4	20,0	22,5	21,37	1,03	4,84	1,06
MW	4	7,8	9,6	8,87	0,77	8,70	0,59
SW	1	–	–	23,80	–	–	–
GH	4	19,3	21,2	20,22	0,79	3,92	0,62

*Falco tinnunculus – Cranium*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	14	45,8	48,8	47,64	0,94	1,97	0,88
CL	14	33,4	35,6	34,49	0,63	1,83	0,40
RL	14	16,8	19,4	18,01	0,61	3,39	0,37
BL	13	7,3	8,3	7,61	0,30	3,89	0,09
GW	13	28,5	30,5	29,44	0,64	2,16	0,41
TW	13	28,2	30,2	29,39	0,58	1,97	0,34
FW	13	22,4	24,1	23,33	0,53	2,29	0,28
MW	14	8,0	10,0	9,44	0,56	5,97	0,31
SW	2	22,9	25,8	24,35	–	–	–
GH	13	21,5	22,7	21,91	0,38	1,73	0,14

*Falco tinnunculus – Cranium*

Table 1

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	20	44,6	50,4	48,24	1,33	2,76	1,77
CL	22	33,2	36,0	34,69	0,78	2,24	0,61
RL	21	17,0	20,3	18,36	0,77	4,18	0,59
BL	22	7,1	8,2	7,67	0,33	4,25	0,11
GW	22	27,7	31,3	29,64	0,93	3,13	0,86
TW	20	28,4	31,1	29,89	0,82	2,74	0,67
FW	22	22,1	24,2	23,40	0,56	2,41	0,31
MW	21	8,6	11,0	9,63	0,63	6,55	0,40
SW	–	–	–	–	–	–	–
GH	21	21,8	23,7	22,24	0,44	1,97	0,19

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	12	45,5	49,6	47,71	1,21	2,54	1,46
CL	12	33,3	35,6	34,44	0,68	1,96	0,46
RL	12	17,0	18,9	18,06	0,64	3,57	0,41
BL	10	7,0	7,9	7,46	0,32	4,34	0,10
GW	11	28,5	30,7	29,35	0,70	2,39	0,49
TW	10	28,0	30,7	29,46	0,82	2,79	0,67
FW	12	22,7	23,8	23,26	0,37	1,59	0,14
MW	12	6,7	10,7	9,21	1,23	13,34	1,51
SW	1	–	–	25,30	–	–	–
GH	10	21,5	23,0	22,07	0,45	2,03	0,20

*Falco vespertinus – Cranium*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	9	40,6	44,0	42,32	0,90	2,13	0,81
CL	9	28,3	30,7	29,83	0,75	2,52	0,56
RL	9	16,0	17,0	16,41	0,37	2,27	0,14
BL	9	6,2	7,2	6,68	0,36	5,44	0,13
GW	8	24,8	26,9	25,91	0,68	2,61	0,46
TW	7	25,4	25,9	25,59	0,21	0,83	0,04
FW	8	18,9	20,2	19,54	0,42	2,15	0,18
MW	9	8,1	9,6	8,74	0,47	5,37	0,22
SW	1	–	–	22,80	–	–	–
GH	9	18,7	19,9	19,22	0,39	2,04	0,15

*Falco vespertinus – Cranium*

Table 1

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	12	41,0	44,1	42,58	0,96	2,26	0,93
CL	12	29,0	31,2	30,08	0,75	2,51	0,56
RL	12	15,8	18,1	16,94	0,55	3,26	0,30
BL	12	6,3	7,5	6,78	0,32	4,74	0,10
GW	12	24,2	27,0	25,88	0,91	3,51	0,83
TW	11	24,3	26,8	25,88	0,87	3,35	0,76
FW	12	18,3	20,7	19,70	0,72	3,66	0,52
MW	11	7,8	10,1	8,90	0,62	6,93	0,38
SW	–	–	–	–	–	–	–
GH	12	18,8	20,0	19,49	0,42	2,15	0,18

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	5	42,0	43,6	42,64	0,62	1,45	0,38
CL	6	29,1	31,0	29,92	0,76	2,53	0,58
RL	6	16,0	16,8	16,53	0,29	1,78	0,08
BL	6	6,5	6,9	6,73	0,14	2,03	0,02
GW	4	24,9	26,6	25,67	0,70	2,74	0,49
TW	5	24,7	26,0	25,32	0,53	2,08	0,28
FW	6	19,3	19,8	19,53	0,16	0,84	0,03
MW	6	6,6	9,6	8,28	1,00	12,11	1,00
SW	1	–	–	20,50	–	–	–
GH	6	18,8	19,6	19,27	0,28	1,46	0,08

*Falco naumanni – Cranium*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	41,4	41,4	41,40	–	–	–
CL	1	–	–	29,30	–	–	–
RL	1	–	–	16,70	–	–	–
BL	1	–	–	6,80	–	–	–
GW	2	23,6	24,8	24,20	–	–	–
TW	1	–	–	24,10	–	–	–
FW	1	–	–	19,30	–	–	–
MW	1	–	–	7,70	–	–	–
SW	–	–	–	–	–	–	–
GH	1	–	–	19,60	–	–	–

*Falco naumanni* – Cranium

Table 1

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	41,00	–	–	–
CL	1	–	–	28,70	–	–	–
RL	1	–	–	16,70	–	–	–
BL	1	–	–	6,70	–	–	–
GW	1	–	–	25,00	–	–	–
TW	1	–	–	24,80	–	–	–
FW	1	–	–	19,60	–	–	–
MW	1	–	–	9,00	–	–	–
SW	1	–	–	17,80	–	–	–
GH	1	–	–	19,60	–	–	–

*Falco subbuteo – Mandibula*

Table 2

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	10	29,8	32,3	30,88	0,89	2,88	0,79
SL	10	4,0	4,8	4,44	0,21	4,77	0,04
GW	9	24,6	27,2	25,36	0,80	3,17	0,64
RH	10	4,1	4,9	4,43	0,24	5,33	0,06

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	6	32,0	34,1	33,10	0,73	2,12	0,53
SL	6	4,3	5,1	4,75	0,33	6,89	0,11
GW	5	25,4	28,3	27,40	1,18	4,33	1,39
RH	6	4,5	5,1	4,82	0,22	4,63	0,05

*Falco columbarius – Mandibula*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	14	28,0	29,6	28,83	0,47	1,63	0,22
SL	14	4,0	4,8	4,41	0,25	5,66	0,06
GW	13	23,1	24,8	23,92	0,51	2,15	0,26
RH	14	3,8	4,3	4,07	0,13	3,11	0,02

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	19	29,8	32,0	30,95	0,58	1,89	0,34
SL	18	4,3	5,1	4,76	0,20	4,22	0,04
GW	17	24,3	26,9	25,43	0,75	2,94	0,56
RH	20	4,1	4,6	4,35	0,14	3,29	0,02

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	3	28,9	30,9	29,87	1,00	3,35	1,00
SL	3	4,2	5,0	4,53	0,42	9,18	0,18
GW	3	24,0	25,2	24,47	0,64	2,63	0,41
RH	3	4,0	4,3	4,13	0,15	3,70	0,02

*Falco tinnunculus – Mandibula*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	14	30,7	33,1	31,66	0,77	2,44	0,59
SL	14	4,3	5,0	4,61	0,19	4,12	0,04
GW	14	26,0	29,0	27,14	0,75	2,77	0,56
RH	14	4,2	4,6	4,51	0,11	2,43	0,01



*Falco tinnunculus – Mandibula*

Table 2

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	23	30,4	34,3	32,31	0,97	3,01	0,94
SL	23	4,1	5,1	4,70	0,26	5,58	0,07
GW	22	26,0	29,2	27,73	0,88	3,17	0,77
RH	23	4,4	5,1	4,68	0,19	4,07	0,04

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	12	30,4	33,7	31,82	0,98	3,07	0,96
SL	12	4,2	4,9	4,52	0,18	4,10	0,03
GW	11	25,8	28,6	27,50	0,76	2,75	0,58
RH	12	4,1	4,8	4,55	0,19	4,14	0,04

*Falco vespertinus – Mandibula*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	9	26,7	29,3	28,48	0,84	2,95	0,70
SL	9	3,7	4,8	4,30	0,32	7,44	0,10
GW	8	23,4	24,7	24,02	0,41	1,70	0,17
RH	9	4,1	4,6	4,38	0,16	3,57	0,03

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	13	28,0	31,4	29,10	0,87	3,00	0,76
SL	13	4,0	4,8	4,42	0,26	5,85	0,07
GW	12	22,5	26,2	24,74	1,10	4,46	1,21
RH	13	4,1	4,8	4,55	0,22	4,80	0,05

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	5	28,5	29,8	28,96	0,50	1,74	0,25
SL	5	4,1	4,4	4,28	0,11	2,56	0,01
GW	5	23,4	24,6	24,02	0,51	2,13	0,26
RH	5	4,1	4,6	4,34	0,19	4,49	0,04

*Falco naumanni – Mandibula*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	28,60	–	–	–
SL	1	–	–	4,30	–	–	–
GW	1	–	–	24,10	–	–	–
RH	1	–	–	4,40	–	–	–

*Falco naumanni – Mandibula*

Table 2

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	27,60	–	–	–
SL	1	–	–	4,20	–	–	–
GW	1	–	–	23,10	–	–	–
RH	1	–	–	4,30	–	–	–

*Falco subbuteo – Quadratum*

Table 3

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
<b>GH</b>	10	10,1	10,9	10,54	0,27	2,54	0,07
<b>GW</b>	10	8,5	9,4	8,96	0,26	2,89	0,07
<b>MW</b>	10	6,3	6,8	6,60	0,17	2,57	0,03
<b>CW</b>	10	2,5	2,9	2,65	0,13	4,79	0,02
<b>OW</b>	8	5,0	5,7	5,40	0,24	4,43	0,06

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
<b>GH</b>	6	10,7	11,6	11,13	0,41	3,71	0,17
<b>GW</b>	7	9,0	10,2	9,69	0,38	3,93	0,14
<b>MW</b>	7	6,7	7,3	7,11	0,21	2,97	0,04
<b>CW</b>	7	2,7	3,5	3,06	0,26	8,62	0,07
<b>OW</b>	4	5,4	5,9	5,67	0,26	4,63	0,07

*Falco columbarius – Quadratum*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
<b>GH</b>	14	9,8	10,4	10,11	0,19	1,89	0,04
<b>GW</b>	14	8,4	9,2	8,69	0,24	2,81	0,06
<b>MW</b>	14	6,3	6,7	6,51	0,12	1,85	0,01
<b>CW</b>	14	2,2	2,9	2,61	0,17	6,69	0,03
<b>OW</b>	11	4,8	5,2	5,01	0,10	2,08	0,01

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
<b>GH</b>	20	10,1	11,4	10,60	0,30	2,83	0,09
<b>GW</b>	19	8,6	9,9	9,27	0,33	3,56	0,11
<b>MW</b>	20	6,5	7,5	6,88	0,24	3,47	0,06
<b>CW</b>	20	2,6	3,2	2,88	0,16	5,42	0,02
<b>OW</b>	19	4,9	5,6	5,25	0,19	3,67	0,04

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
<b>GH</b>	4	9,6	10,5	10,07	0,38	3,75	0,14
<b>GW</b>	4	8,6	9,2	8,92	0,25	2,80	0,06
<b>MW</b>	4	6,4	6,8	6,55	0,19	2,92	0,04
<b>CW</b>	4	2,1	2,9	2,62	0,38	14,38	0,14
<b>OW</b>	3	5,1	5,3	5,17	0,11	2,23	0,01

*Falco tinnunculus – Quadratum*

Table 3

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GH	13	9,9	11,7	11,18	0,45	4,03	0,20
GW	13	8,9	10,3	9,68	0,38	3,96	0,15
MW	13	7,1	8,1	7,51	0,32	4,26	0,10
CW	13	2,6	3,2	2,90	0,18	6,14	0,03
OW	12	5,3	6,2	5,82	0,26	4,46	0,07

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GH	22	10,3	12,0	11,30	0,43	3,77	0,18
GW	22	9,4	10,6	10,01	0,30	3,01	0,09
MW	22	7,1	8,3	7,65	0,34	4,41	0,11
CW	22	2,6	3,5	3,04	0,25	8,28	0,06
OW	21	5,6	6,4	6,00	0,23	3,78	0,05

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GH	12	10,8	11,7	11,22	0,34	3,01	0,11
GW	12	9,1	10,6	9,75	0,42	4,34	0,18
MW	12	6,9	8,0	7,52	0,32	4,28	0,10
CW	12	2,7	3,4	2,99	0,24	7,99	0,06
OW	12	5,4	6,5	5,96	0,28	4,72	0,08

*Falco vespertinus – Quadratum*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GH	7	8,9	10,0	9,51	0,34	3,61	0,12
GW	7	8,2	9,2	8,74	0,35	4,06	0,13
MW	7	6,0	6,5	6,23	0,18	2,89	0,03
CW	7	1,8	2,3	2,06	0,17	8,35	0,03
OW	7	4,7	5,1	4,86	0,14	2,88	0,02

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GH	12	8,9	10,2	9,54	0,44	4,63	0,19
GW	11	8,1	9,5	8,92	0,38	4,22	0,14
MW	12	6,2	6,7	6,48	0,17	2,70	0,03
CW	12	1,9	2,3	2,10	0,13	6,09	0,02
OW	12	4,6	5,4	4,98	0,21	4,26	0,04

*Falco vespertinus – Quadratum*

Table 3

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GH	6	9,0	9,8	9,43	0,30	3,19	0,09
GW	6	8,6	9,2	8,85	0,23	2,65	0,05
MW	6	6,1	6,8	6,30	0,27	4,26	0,07
CW	6	1,9	2,2	2,07	0,12	5,86	0,01
OW	6	4,7	5,1	4,92	0,15	2,99	0,02

*Falco naumanni – Quadratum*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GH	1	–	–	10,00	–	–	–
GW	1	–	–	8,80	–	–	–
MW	1	–	–	6,40	–	–	–
CW	1	–	–	2,50	–	–	–
OW	–	–	–	–	–	–	–

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GH	–	–	–	–	–	–	–
GW	1	–	–	8,50	–	–	–
MW	1	–	–	6,30	–	–	–
CW	1	–	–	2,00	–	–	–
OW	–	–	–	–	–	–	–

*Falco subbuteo* – *Coracoideum*

Table 4

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	14	29,4	33,1	31,39	1,06	3,39	1,13
ML	14	27,3	29,9	28,66	0,89	3,09	0,78
CW	14	2,8	3,2	2,99	0,12	4,03	0,01
GW	14	11,3	13,0	12,25	0,52	4,27	0,27
AW	14	10,8	12,6	11,94	0,57	4,81	0,33

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	11	32,6	34,7	33,82	0,72	2,14	0,52
ML	11	29,5	32,0	31,07	0,96	3,09	0,92
CW	11	3,0	3,4	3,23	0,16	4,82	0,02
GW	11	12,5	14,2	13,26	0,64	4,87	0,42
AW	11	12,0	13,7	12,85	0,71	5,52	0,50

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	3	32,6	32,9	32,73	0,15	0,47	0,02
ML	3	29,9	30,1	30,00	0,10	0,33	0,01
CW	3	3,1	3,2	3,17	0,06	1,82	0,00
GW	3	12,6	13,1	12,77	0,29	2,26	0,08
AW	3	12,0	12,9	12,40	0,46	3,70	0,21

*Falco columbarius* – *Coracoideum*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	15	29,1	30,8	29,87	0,49	1,63	0,24
ML	15	26,9	28,8	27,94	0,47	1,67	0,22
CW	15	2,4	2,8	2,60	0,11	4,11	0,01
GW	15	10,0	10,9	10,36	0,30	2,87	0,09
AW	15	9,6	10,6	10,17	0,29	2,85	0,08

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	20	30,6	35,1	32,97	0,89	2,71	0,80
ML	20	28,5	33,1	30,82	0,88	2,84	0,77
CW	20	2,7	3,0	2,82	0,11	3,96	0,01
GW	20	11,0	12,5	11,49	0,43	3,76	0,19
AW	20	10,6	12,1	11,21	0,46	4,09	0,21

*Falco columbarius – Coracoideum*

Table 4

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	31,1	32,6	31,85	–	–	–
ML	2	29,0	30,7	29,85	–	–	–
CW	2	2,5	2,7	2,60	–	–	–
GW	2	10,2	11,0	10,60	–	–	–
AW	2	10,1	10,8	10,45	–	–	–

*Falco eleonora – Coracoideum*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	37,70	–	–	–
ML	1	–	–	34,10	–	–	–
CW	1	–	–	3,70	–	–	–
GW	1	–	–	14,70	–	–	–
AW	1	–	–	14,60	–	–	–

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	36,0	38,0	37,00	–	–	–
ML	2	33,7	35,0	34,35	–	–	–
CW	2	4,0	4,0	4,00	–	–	–
GW	2	14,3	14,3	14,30	–	–	–
AW	2	14,0	14,4	14,20	–	–	–

*Falco tinnunculus – Coracoideum*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	21	27,7	31,4	29,50	0,87	2,94	0,75
ML	21	25,5	29,0	27,00	0,92	3,41	0,85
CW	21	2,3	3,1	2,82	0,18	6,32	0,03
GW	21	10,4	12,9	11,42	0,65	5,65	0,42
AW	21	10,4	13,3	11,49	0,73	6,38	0,54

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	27	27,5	32,4	30,30	1,15	3,79	1,32
ML	27	24,9	29,5	27,67	1,11	4,02	1,24
CW	27	2,5	3,2	2,82	0,18	6,32	0,03
GW	26	11,0	12,9	11,78	0,52	4,43	0,27
AW	27	10,8	13,0	11,79	0,54	4,62	0,30

*Falco tinnunculus – Coracoideum*

Table 4

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	16	28,3	31,5	29,67	0,93	3,13	0,86
ML	16	25,8	28,6	27,13	0,81	3,00	0,66
CW	16	2,4	3,1	2,82	0,18	6,40	0,03
GW	16	10,6	12,3	11,42	0,46	4,00	0,21
AW	16	10,7	12,4	11,51	0,47	4,11	0,22

*Falco vespertinus – Coracoideum*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	11	26,3	29,0	27,56	0,85	3,08	0,72
ML	11	24,5	26,9	25,64	0,76	2,98	0,58
CW	11	2,3	2,7	2,50	0,15	6,20	0,02
GW	11	9,2	10,9	10,42	0,50	4,76	0,25
AW	11	9,0	10,7	10,28	0,49	4,78	0,24

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	13	26,3	29,7	27,94	0,97	3,49	0,95
ML	13	24,2	28,1	26,14	1,07	4,10	1,15
CW	13	2,4	2,7	2,50	0,10	4,00	0,01
GW	13	9,9	11,4	10,59	0,37	3,54	0,14
AW	13	9,6	11,2	10,43	0,40	3,84	0,16

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	9	26,7	28,8	27,94	0,66	2,37	0,44
ML	9	24,7	26,9	25,91	0,77	2,96	0,59
CW	10	2,2	2,7	2,45	0,16	6,73	0,03
GW	10	9,9	10,8	10,30	0,27	2,63	0,07
AW	10	9,6	10,8	10,15	0,36	3,51	0,13

*Falco naumanni – Coracoideum*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	3	24,8	25,9	25,37	0,55	2,17	0,30
ML	3	22,4	23,5	23,00	0,56	2,42	0,31
CW	3	2,4	2,8	2,60	0,20	7,69	0,04
GW	3	10,0	11,7	10,87	0,85	7,83	0,72
AW	3	10,3	11,8	11,00	0,75	6,86	0,57



*Falco naumanni* – *Coracoideum*

Table 4

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	25,8	25,8	25,80	–	–	–
ML	2	23,2	23,9	23,55	–	–	–
CW	2	2,5	2,7	2,60	–	–	–
GW	2	10,2	10,8	10,50	–	–	–
AW	2	10,1	10,4	10,25	–	–	–

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	25,60	–	–	–
ML	1	–	–	23,10	–	–	–
CW	1	–	–	2,30	–	–	–
GW	1	–	–	10,10	–	–	–
AW	1	–	–	9,70	–	–	–

*Falco subbuteo – Scapula*

Table 5

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	13	33,5	38,7	36,78	1,44	3,92	2,07
GW	14	8,2	9,5	8,95	0,32	3,63	0,11
CW	14	2,3	2,8	2,55	0,16	6,48	0,03
GH	14	3,4	4,1	3,66	0,19	5,20	0,04

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	11	37,7	42,5	39,70	1,49	3,76	2,22
GW	11	9,0	10,3	9,54	0,36	3,82	0,13
CW	11	2,5	3,0	2,67	0,18	6,92	0,03
GH	11	3,4	4,2	3,89	0,22	5,57	0,05

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	3	39,0	40,1	39,47	0,57	1,44	0,32
GW	3	9,3	9,6	9,40	0,17	1,84	0,03
CW	3	2,4	2,6	2,53	0,11	4,56	0,01
GH	3	3,8	4,0	3,90	0,10	2,56	0,01

*Falco columbarius – Scapula*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	15	32,7	36,1	34,48	0,84	2,44	0,71
GW	16	7,3	8,0	7,66	0,22	2,82	0,05
CW	16	2,0	2,4	2,31	0,13	5,44	0,02
GH	16	2,9	3,8	3,39	0,24	6,97	0,06

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	20	34,7	39,7	37,54	1,23	3,26	1,50
GW	21	7,7	8,8	8,31	0,28	3,41	0,08
CW	20	2,2	2,7	2,51	0,12	4,99	0,02
GH	21	3,3	4,0	3,69	0,16	4,36	0,03

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	35,3	36,1	35,70	–	–	–
GW	2	7,9	8,3	8,10	–	–	–
CW	2	2,4	2,5	2,45	–	–	–
GH	2	3,4	3,6	3,50	–	–	–

*Falco eleonorae – Scapula*

Table 5

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	44,90	–	–	–
GW	1	–	–	10,60	–	–	–
CW	1	–	–	2,80	–	–	–
GH	1	–	–	4,10	–	–	–

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	42,60	–	–	–
GW	1	–	–	10,80	–	–	–
CW	1	–	–	3,20	–	–	–
GH	1	–	–	4,30	–	–	–

*Falco tinnunculus – Scapula*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	21	32,3	36,4	34,48	0,94	2,74	0,89
GW	21	7,0	8,1	7,60	0,28	3,75	0,08
CW	21	2,0	2,7	2,34	0,16	6,82	0,03
GH	21	2,7	3,4	3,01	0,18	6,12	0,03

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	27	32,7	38,4	35,48	1,46	4,11	2,13
GW	27	7,2	8,4	7,88	0,32	4,01	0,10
CW	27	2,0	2,7	2,34	0,14	6,07	0,02
GH	27	2,7	3,6	3,14	0,19	6,13	0,04

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	15	33,0	36,1	34,72	1,15	3,30	1,31
GW	16	7,0	8,5	7,67	0,34	4,48	0,12
CW	16	2,0	2,7	2,32	0,16	6,75	0,02
GH	16	2,7	3,5	3,08	0,20	6,51	0,04

*Falco vespertinus – Scapula*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	11	30,9	34,0	32,58	1,10	3,36	1,20
GW	11	6,6	7,5	7,10	0,24	3,39	0,06
CW	11	2,0	2,3	2,14	0,11	5,24	0,01
GH	11	2,5	3,0	2,78	0,16	5,76	0,03

*Falco vespertinus – Scapula*

Table 5

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	12	31,2	35,4	33,02	1,43	4,34	2,05
GW	13	6,9	7,9	7,32	0,34	4,60	0,11
CW	13	2,0	2,5	2,19	0,17	7,78	0,03
GH	13	2,5	3,2	2,85	0,21	7,24	0,04

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	6	31,5	34,0	32,62	1,12	3,45	1,27
GW	9	6,6	7,8	7,07	0,45	6,33	0,20
CW	9	1,8	2,2	2,03	0,14	6,95	0,02
GH	9	2,6	3,0	2,77	0,13	4,78	0,02

*Falco naumanni – Scapula*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	3	30,0	31,9	31,03	0,96	3,10	0,92
GW	3	6,4	7,3	6,87	0,45	6,57	0,20
CW	3	1,9	2,2	2,07	0,15	7,39	0,02
GH	3	2,6	3,2	2,80	0,35	12,37	0,12

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	29,3	31,0	30,15	–	–	–
GW	2	6,8	6,9	6,85	–	–	–
CW	2	2,0	2,0	2,00	–	–	–
GH	2	2,3	2,8	2,55	–	–	–

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	–	–	–	–	–	–	–
GW	1	–	–	6,70	–	–	–
CW	1	–	–	1,60	–	–	–
GH	1	–	–	2,60	–	–	–

*Falco subbuteo – Humerus*

Table 6

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	11	51,3	55,8	54,04	1,25	2,32	1,57
PW	12	11,6	13,3	12,58	0,54	4,28	0,29
CT	12	17,2	19,9	18,55	0,79	4,23	0,62
CW	12	4,5	4,9	4,72	0,12	2,57	0,01
DW	12	9,9	10,9	10,45	0,28	2,69	0,08

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	6	55,2	60,2	57,53	2,12	3,69	4,50
PW	8	12,4	14,6	13,49	0,67	4,94	0,44
CT	8	18,4	20,6	19,42	0,75	3,86	0,56
CW	7	4,6	5,2	4,90	0,24	4,86	0,06
DW	7	10,5	11,4	11,01	0,33	2,98	0,11

*Falco columbarius – Humerus*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	15	43,8	46,9	45,69	0,76	1,65	0,57
PW	16	10,3	11,5	11,01	0,34	3,07	0,11
CT	16	15,3	16,3	15,89	0,33	2,06	0,11
CW	15	3,9	4,4	4,15	0,12	2,86	0,01
DW	15	8,0	9,5	9,18	0,36	3,95	0,13

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	21	47,4	54,0	50,51	1,26	2,49	1,58
PW	21	11,1	12,9	12,06	0,39	3,23	0,15
CT	21	16,5	18,3	17,27	0,41	2,39	0,17
CW	21	4,2	4,6	4,38	0,13	2,94	0,02
DW	21	9,5	10,3	10,00	0,21	2,07	0,04

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	46,1	49,8	47,95	–	–	–
PW	2	11,4	11,8	11,60	–	–	–
CT	2	16,3	17,3	16,80	–	–	–
CW	2	4,3	4,4	4,35	–	–	–
DW	2	9,6	9,8	9,70	–	–	–

*Falco eleonorae – Humerus*

Table 6

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	68,20	–	–	–
PW	1	–	–	15,50	–	–	–
CT	1	–	–	18,40	–	–	–
CW	1	–	–	5,30	–	–	–
DW	1	–	–	12,00	–	–	–

*Falco tinnunculus – Humerus*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	16	50,3	56,6	52,86	1,58	3,00	2,51
PW	16	10,7	12,4	11,44	0,51	4,44	0,26
CT	16	14,8	17,4	16,07	0,63	3,90	0,39
CW	17	4,0	4,4	4,22	0,12	2,81	0,01
DW	17	8,9	9,8	9,42	0,25	2,63	0,06

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	25	51,0	58,4	54,44	2,07	3,81	4,30
PW	25	11,1	12,7	11,96	0,46	3,84	0,21
CT	25	14,3	17,5	16,67	0,73	4,36	0,53
CW	25	4,0	4,9	4,37	0,21	4,89	0,05
DW	25	9,1	10,3	9,78	0,35	3,63	0,13

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	13	51,6	57,1	53,55	1,57	2,93	2,46
PW	15	10,5	12,2	11,57	0,55	4,79	0,31
CT	15	14,9	17,3	16,35	0,72	4,38	0,51
CW	15	4,0	4,6	4,31	0,18	4,10	0,03
DW	13	8,7	10,3	9,58	0,43	4,45	0,18

*Falco vespertinus – Humerus*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	10	48,0	53,0	50,30	1,37	2,72	1,87
PW	10	9,8	11,1	10,68	0,44	4,09	0,19
CT	10	14,3	15,2	14,75	0,33	2,27	0,11
CW	10	3,5	4,0	3,76	0,17	4,55	0,03
DW	10	8,2	9,3	8,73	0,33	3,74	0,11

*Falco vespertinus – Humerus*

Table 6

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	14	49,3	53,7	51,26	1,36	2,65	1,85
PW	14	10,5	11,7	11,09	0,40	3,58	0,16
CT	14	14,3	16,4	15,30	0,65	4,22	0,42
CW	15	3,5	4,2	3,87	0,17	4,41	0,03
DW	15	8,5	9,4	8,93	0,29	3,26	0,08

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	49,8	51,7	50,70	0,67	1,32	0,45
PW	7	10,1	11,3	10,66	0,39	3,67	0,15
CT	7	14,2	16,0	14,84	0,77	5,17	0,59
CW	7	3,6	3,9	3,77	0,11	2,95	0,01
DW	7	8,3	9,0	8,63	0,27	3,19	0,08

*Falco naumanni – Humerus*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	3	48,1	52,0	49,90	1,97	3,94	3,87
PW	2	9,5	10,0	9,75	–	–	–
CT	2	13,6	13,6	13,60	–	–	–
CW	2	3,6	3,8	3,70	–	–	–
DW	2	8,2	8,2	8,20	–	–	–

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	47,7	49,0	48,35	–	–	–
PW	2	9,7	9,8	9,75	–	–	–
CT	2	12,8	13,8	13,30	–	–	–
CW	2	3,5	4,1	3,80	–	–	–
DW	2	8,3	8,6	8,45	–	–	–

*Falco subbuteo – Radius*

Table 7

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	11	53,6	58,6	56,45	1,58	2,80	2,50
SP	11	2,5	3,1	2,84	0,16	5,74	0,03
GP	11	3,7	4,1	3,88	0,16	4,12	0,03
CW	11	1,8	2,2	1,94	0,12	6,23	0,01
DW	11	4,7	5,4	5,06	0,21	4,17	0,04
DD	11	3,6	4,0	3,74	0,11	3,01	0,01

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	58,6	63,0	61,06	1,33	2,17	1,76
SP	7	2,7	3,1	2,94	0,14	4,75	0,02
GP	7	4,0	4,7	4,31	0,25	5,90	0,06
CW	7	1,9	2,2	2,06	0,10	4,74	0,01
DW	7	5,1	5,4	5,26	0,13	2,42	0,02
DD	7	3,7	4,3	4,00	0,21	5,20	0,04

*Falco columbarius – Radius*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	16	45,3	49,6	47,66	0,96	2,02	0,93
SP	16	2,3	2,5	2,41	0,08	3,21	0,01
GP	16	3,2	3,6	3,42	0,11	3,11	0,01
CW	16	1,6	1,8	1,74	0,06	3,56	0,00
DW	16	4,2	4,5	4,31	0,08	1,79	0,01
DD	16	3,0	3,3	3,17	0,09	2,76	0,01

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	21	49,3	55,6	52,18	1,17	2,25	1,37
SP	21	2,4	2,8	2,62	0,10	3,74	0,01
GP	21	3,5	4,0	3,71	0,13	3,54	0,02
CW	21	1,7	2,0	1,87	0,07	3,53	0,00
DW	21	4,4	4,8	4,63	0,11	2,38	0,01
DD	21	3,1	3,7	3,32	0,16	4,93	0,03



*Falco columbarius – Radius*

Table 7

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	48,1	51,0	49,55	–	–	–
SP	2	2,4	2,7	2,55	–	–	–
GP	2	3,5	3,5	3,50	–	–	–
CW	2	1,8	1,8	1,80	–	–	–
DW	2	4,4	4,5	4,45	–	–	–
DD	2	3,2	3,3	3,25	–	–	–

*Falco tinnunculus – Radius*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	17	52,8	60,5	55,78	2,04	3,66	4,16
SP	17	2,3	2,8	2,58	0,15	5,74	0,02
GP	17	3,3	3,9	3,55	0,17	4,89	0,03
CW	17	1,6	2,0	1,81	0,11	6,02	0,01
DW	17	4,0	5,0	4,61	0,24	5,19	0,06
DD	17	2,7	3,4	3,02	0,16	5,40	0,03

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	25	54,6	62,7	58,10	2,23	3,83	4,96
SP	25	2,4	2,9	2,68	0,15	5,76	0,02
GP	25	3,3	4,0	3,71	0,22	5,99	0,05
CW	25	1,6	2,0	1,84	0,11	5,87	0,01
DW	25	4,2	5,2	4,78	0,27	5,68	0,07
DD	25	2,9	3,6	3,20	0,18	5,56	0,03

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	14	54,1	60,8	56,96	2,05	3,60	4,20
SP	14	2,4	2,8	2,60	0,14	5,44	0,02
GP	14	3,2	4,0	3,61	0,24	6,66	0,06
CW	14	1,5	2,0	1,85	0,16	8,41	0,02
DW	14	4,4	5,0	4,76	0,17	3,66	0,03
DD	14	2,9	3,5	3,14	0,16	5,25	0,03

*Falco vespertinus – Radius*

Table 7

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	10	50,6	55,8	52,98	1,73	3,26	2,99
SP	10	2,1	2,5	2,32	0,11	4,89	0,01
GP	10	3,0	3,4	3,16	0,13	4,00	0,02
CW	10	1,5	1,8	1,69	0,09	5,18	0,01
DW	10	4,0	4,5	4,25	0,16	3,72	0,02
DD	10	2,7	3,0	2,86	0,13	4,42	0,02

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	13	50,5	54,9	53,41	1,29	2,42	1,67
SP	13	2,2	2,6	2,40	0,11	4,50	0,01
GP	13	3,0	3,7	3,28	0,18	5,54	0,03
CW	13	1,4	1,8	1,68	0,12	7,37	0,01
DW	13	4,0	4,7	4,31	0,21	4,90	0,04
DD	13	2,5	3,3	2,88	0,19	6,46	0,03

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	53,2	55,3	53,93	0,71	1,32	0,51
SP	7	2,1	2,5	2,31	0,12	5,25	0,01
GP	7	3,0	3,2	3,16	0,08	2,49	0,01
CW	7	1,3	1,9	1,60	0,21	13,01	0,04
DW	7	3,9	4,3	4,14	0,15	3,65	0,02
DD	7	2,4	2,9	2,77	0,18	6,49	0,03

*Falco naumanni – Radius*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	51,90	–	–	–
SP	1	–	–	2,30	–	–	–
GP	1	–	–	3,20	–	–	–
CW	1	–	–	1,70	–	–	–
DW	1	–	–	4,20	–	–	–
DD	1	–	–	2,60	–	–	–

*Falco naumanni – Radius*

Table 7

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	51,40	–	–	–
SP	1	–	–	2,30	–	–	–
GP	1	–	–	3,10	–	–	–
CW	1	–	–	1,70	–	–	–
DW	1	–	–	4,40	–	–	–
DD	1	–	–	2,70	–	–	–

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	50,30	–	–	–
SP	1	–	–	2,30	–	–	–
GP	1	–	–	3,00	–	–	–
CW	1	–	–	1,40	–	–	–
DW	1	–	–	4,40	–	–	–
DD	1	–	–	2,40	–	–	–

*Falco subbuteo – Ulna*

Table 8

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	11	57,4	63,5	60,85	1,71	2,87	2,94
PW	11	6,8	7,7	7,28	0,24	3,35	0,06
PH	10	6,5	7,3	6,91	0,25	3,57	0,06
PT	10	5,3	6,0	5,75	0,20	3,40	0,04
CW	11	3,7	4,3	3,99	0,17	4,26	0,03
DT	11	6,6	7,3	7,04	0,19	2,71	0,04

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	63,3	67,5	65,89	1,33	2,01	1,76
PW	7	7,3	8,1	7,81	0,27	3,50	0,07
PH	7	7,0	7,6	7,30	0,22	2,96	0,05
PT	7	5,7	6,3	6,07	0,24	4,00	0,06
CW	7	4,1	4,5	4,26	0,13	2,99	0,02
DT	7	7,1	7,8	7,57	0,28	3,71	0,08

*Falco columbarius – Ulna*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	15	49,3	54,3	51,74	1,05	2,02	1,09
PW	15	6,0	6,4	6,24	0,11	1,80	0,01
PH	15	5,7	6,2	6,01	0,13	2,22	0,02
PT	15	4,7	5,1	4,95	0,11	2,14	0,01
CW	16	3,2	3,5	3,40	0,10	3,04	0,01
DT	16	5,8	6,2	6,06	0,11	1,81	0,01

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	21	53,8	60,4	56,77	1,20	2,12	1,44
PW	21	6,5	7,2	6,86	0,19	2,74	0,03
PH	21	6,2	6,9	6,54	0,16	2,44	0,02
PT	21	5,2	5,6	5,43	0,14	2,55	0,02
CW	21	3,4	3,9	3,68	0,14	3,84	0,02
DT	21	6,2	6,9	6,65	0,15	2,26	0,02

*Falco columbarius – Ulna*

Table 8

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	52,4	55,7	54,05	–	–	–
PW	2	6,4	6,7	6,55	–	–	–
PH	2	6,2	6,5	6,35	–	–	–
PT	2	5,1	5,3	5,20	–	–	–
CW	2	3,5	3,6	3,55	–	–	–
DT	2	6,1	6,5	6,30	–	–	–

*Falco eleonora – Ulna*

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	76,70	–	–	–
PW	–	–	–	–	–	–	–
PH	–	–	–	–	–	–	–
PT	–	–	–	–	–	–	–
CW	1	–	–	5,20	–	–	–
DT	1	–	–	7,70	–	–	–

*Falco tinnunculus – Ulna*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	17	56,5	64,7	60,12	2,10	3,50	4,43
PW	17	6,2	6,9	6,63	0,21	3,10	0,04
PH	17	5,6	6,4	6,08	0,21	3,42	0,04
PT	17	4,9	5,5	5,20	0,17	3,33	0,03
CW	17	3,3	3,7	3,58	0,11	3,21	0,01
DT	17	6,1	6,5	6,31	0,15	2,41	0,02

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	25	59,1	67,0	62,43	2,16	3,46	4,67
PW	25	6,5	7,4	6,93	0,26	3,74	0,07
PH	25	6,0	6,8	6,36	0,23	3,57	0,05
PT	25	5,2	5,8	5,45	0,18	3,27	0,03
CW	25	3,4	4,1	3,74	0,17	4,50	0,03
DT	25	6,3	7,2	6,66	0,25	3,83	0,06

*Falco tinnunculus – Ulna*

Table 8

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	12	58,2	65,5	61,06	1,98	3,24	3,92
PW	13	6,2	7,1	6,78	0,23	3,36	0,05
PH	13	5,9	6,5	6,19	0,17	2,67	0,03
PT	13	4,9	5,5	5,28	0,17	3,20	0,03
CW	13	3,4	3,9	3,72	0,19	5,04	0,03
DT	13	6,1	6,8	6,48	0,21	3,26	0,04

*Falco verpertinus – Ulna*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	10	54,6	60,2	57,00	1,82	3,20	3,32
PW	10	5,8	6,3	6,11	0,16	2,61	0,02
PH	10	5,7	6,2	5,86	0,15	2,57	0,02
PT	10	4,8	5,0	4,90	0,08	1,67	0,01
CW	10	3,2	3,7	3,49	0,20	5,80	0,04
DT	10	5,7	6,4	6,08	0,20	3,36	0,04

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	14	54,5	60,6	57,88	1,68	2,91	2,83
PW	14	6,0	6,7	6,30	0,23	3,74	0,05
PH	14	5,6	6,6	6,02	0,27	4,52	0,07
PT	14	4,7	5,4	5,01	0,22	4,46	0,05
CW	14	3,2	4,0	3,58	0,23	6,41	0,05
DT	14	6,0	6,6	6,24	0,19	3,06	0,04

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	57,2	58,6	57,76	0,45	0,79	0,21
PW	7	5,8	6,4	6,04	0,18	3,00	0,03
PH	7	5,5	6,3	5,77	0,28	4,87	0,08
PT	7	4,7	5,0	4,81	0,15	3,04	0,02
CW	7	3,2	3,6	3,41	0,13	3,94	0,02
DT	7	5,8	6,1	5,96	0,10	1,64	0,01

*Falco naumanni – Ulna*

Table 8

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	55,0	55,5	55,25	–	–	–
PW	1	–	–	5,70	–	–	–
PH	1	–	–	5,40	–	–	–
PT	1	–	–	4,70	–	–	–
CW	2	3,3	3,6	3,45	–	–	–
DT	2	5,6	5,7	3,65	–	–	–

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	54,90	–	–	–
PW	1	–	–	6,10	–	–	–
PH	1	–	–	5,80	–	–	–
PT	1	–	–	5,00	–	–	–
CW	1	–	–	3,60	–	–	–
DT	1	–	–	6,00	–	–	–

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	53,60	–	–	–
PW	1	–	–	5,70	–	–	–
PH	1	–	–	5,50	–	–	–
PT	1	–	–	4,70	–	–	–
CW	1	–	–	3,30	–	–	–
DT	1	–	–	5,60	–	–	–

*Falco subbuteo* – *Carpometacarpus*

Table 9

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	11	34,9	38,5	37,14	1,06	2,85	1,12
PW	11	10,0	10,7	10,38	0,24	2,35	0,06
CW	11	2,4	2,8	2,64	0,12	4,59	0,01
DT	11	6,2	6,8	6,54	0,21	3,23	0,04
SL	11	2,8	4,2	3,76	0,44	11,66	0,19

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	39,0	40,2	39,87	0,41	1,04	0,17
PW	7	10,6	11,5	11,04	0,39	3,54	0,15
CW	7	2,6	3,0	2,83	0,14	4,88	0,02
DT	7	6,7	7,4	7,09	0,22	3,09	0,05
SL	7	3,0	4,3	3,80	0,48	12,53	0,23

*Falco columbarius* – *Carpometacarpus*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	16	29,6	33,1	31,31	0,87	2,78	0,76
PW	16	8,2	9,2	8,93	0,29	3,26	0,08
CW	17	2,0	2,2	2,11	0,09	4,06	0,01
DT	17	5,3	6,1	5,64	0,17	3,07	0,03
SL	16	3,2	4,1	3,61	0,24	6,60	0,06

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	20	32,6	36,6	34,34	0,79	2,31	0,63
PW	21	9,3	10,0	9,69	0,23	2,42	0,05
CW	20	2,1	2,4	2,26	0,09	3,86	0,01
DT	21	5,7	6,3	6,00	0,20	3,37	0,04
SL	20	3,4	4,2	3,83	0,22	5,87	0,05

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	31,6	33,6	32,60	–	–	–
PW	2	9,0	9,4	9,20	–	–	–
CW	2	2,2	2,2	2,20	–	–	–
DT	2	5,7	5,8	5,75	–	–	–
SL	2	3,6	3,7	3,65	–	–	–



*Falco tinnunculus – Carpometacarpus*

Table 9

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	14	33,1	37,6	35,06	1,37	3,92	1,89
PW	14	8,2	9,6	9,19	0,35	3,84	0,12
CW	14	2,1	2,5	2,29	0,11	4,81	0,01
DT	14	5,5	6,3	5,92	0,23	3,93	0,05
SL	14	3,0	4,4	3,44	0,33	9,65	0,11

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	25	33,3	39,3	36,24	1,46	4,04	2,15
PW	25	9,0	10,2	9,53	0,36	3,83	0,13
CW	25	2,2	2,7	2,37	0,14	5,90	0,02
DT	25	5,8	6,6	6,19	0,22	3,53	0,05
SL	25	3,0	4,0	3,64	0,25	6,95	0,06

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	13	33,8	38,4	35,75	1,17	3,28	1,37
PW	13	8,7	10,0	9,32	0,36	3,90	0,13
CW	14	2,1	2,8	2,41	0,19	8,06	0,04
DT	14	5,7	6,4	6,09	0,22	3,64	0,05
SL	14	2,8	4,0	3,46	0,32	9,13	0,10

*Falco vespertinus – Carpometacarpus*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	10	31,5	34,2	32,62	0,88	2,69	0,77
PW	10	8,4	9,2	8,64	0,29	3,42	0,09
CW	10	2,1	2,4	2,22	0,10	4,65	0,01
DT	10	5,1	5,9	5,52	0,29	5,25	0,08
SL	10	3,0	3,8	3,28	0,27	8,23	0,07

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	14	31,4	34,6	33,12	0,84	2,54	0,71
PW	14	8,4	9,6	8,89	0,35	3,93	0,12
CW	14	2,0	2,6	2,34	0,19	7,98	0,03
DT	14	5,3	6,1	5,67	0,22	3,94	0,05
SL	14	2,8	3,8	3,51	0,33	9,39	0,11

*Falco vespertinus – Carpometacarpus*

Table 9

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	32,6	33,6	33,11	0,35	1,05	0,12
PW	7	8,3	9,0	8,59	0,30	3,46	0,09
CW	7	2,2	2,3	2,24	0,05	2,38	0,00
DT	7	5,2	5,8	5,41	0,23	4,19	0,05
SL	7	2,7	3,8	3,21	0,37	11,56	0,14

*Falco naumanni – Carpometacarpus*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	31,8	32,0	31,90	–	–	–
PW	2	8,0	8,0	8,00	–	–	–
CW	2	2,2	2,3	2,25	–	–	–
DT	2	5,3	5,4	5,35	–	–	–
SL	2	2,7	3,6	3,15	–	–	–

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	31,70	–	–	–
PW	1	–	–	8,40	–	–	–
CW	1	–	–	2,40	–	–	–
DT	1	–	–	5,70	–	–	–
SL	1	–	–	2,80	–	–	–

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	31,80	–	–	–
PW	1	–	–	8,10	–	–	–
CW	1	–	–	2,20	–	–	–
DT	1	–	–	5,40	–	–	–
SL	1	–	–	3,10	–	–	–

*Falco subbuteo – Phalanx digiti alulae*

Table 10

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	11	11,3	12,5	12,05	0,40	3,35	0,16
PW	11	4,5	5,1	4,71	0,20	4,19	0,04
PH	11	2,9	3,3	3,02	0,12	4,14	0,02

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	4	12,6	13,3	12,97	0,29	2,21	0,08
PW	4	4,8	5,2	4,95	0,19	3,87	0,04
PH	4	3,0	3,3	3,17	0,15	4,72	0,02

*Falco columbarius – Phalanx digiti alulae*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	16	9,6	10,6	10,16	0,33	3,21	0,11
PW	16	3,2	4,3	3,89	0,30	7,68	0,09
PH	16	2,6	2,8	2,67	0,07	2,51	0,00

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	21	10,5	12,1	11,19	0,38	3,44	0,15
PW	21	4,0	4,5	4,30	0,15	3,48	0,02
PH	21	2,7	3,1	2,84	0,12	4,10	0,01

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	10,1	11,0	10,55	–	–	–
PW	2	4,2	4,2	4,20	–	–	–
PH	2	2,7	2,8	2,75	–	–	–

*Falco tinnunculus – Phalanx digiti alulae*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	8	10,5	11,2	11,05	0,24	2,22	0,06
PW	8	3,9	4,1	4,00	0,08	1,89	0,01
PH	8	2,5	2,8	2,69	0,11	4,19	0,01

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	18	10,0	12,6	11,38	0,62	5,42	0,38
PW	18	3,7	4,3	3,98	0,18	4,41	0,03
PH	18	2,5	3,1	2,78	0,17	6,24	0,03

*Falco tinnunculus – Phalanx digiti alulae*

Table 10

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	10	10,5	12,4	11,56	0,58	5,01	0,34
PW	10	3,5	4,3	3,93	0,24	6,00	0,06
PH	10	2,5	3,0	2,72	0,13	4,84	0,02

*Falco vespertinus – Phalanx digiti alulae*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	8	9,9	11,3	10,61	0,44	4,17	0,20
PW	8	3,3	3,8	3,47	0,18	5,27	0,03
PH	8	2,3	2,7	2,49	0,12	5,01	0,02

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	9	10,4	12,2	11,01	0,52	4,75	0,27
PW	9	3,4	3,8	3,56	0,13	3,75	0,02
PH	9	2,2	2,7	2,50	0,14	5,66	0,02

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	6	10,2	11,4	10,77	0,44	4,10	0,19
PW	6	3,2	3,7	3,47	0,16	4,71	0,03
PH	6	2,4	2,6	2,48	0,10	3,96	0,01

*Falco naumanni – Phalanx digiti alulae*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	11,00	–	–	–
PW	1	–	–	3,50	–	–	–
PH	1	–	–	2,20	–	–	–

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	11,20	–	–	–
PW	1	–	–	3,60	–	–	–
PH	1	–	–	2,20	–	–	–

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	10,40	–	–	–
PW	1	–	–	3,40	–	–	–
PH	1	–	–	2,20	–	–	–

*Falco subbuteo – Phalanx proximalis digiti majoris*

Table 11

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	10	15,3	16,8	16,11	0,45	2,81	0,20
PW	10	4,0	4,5	4,28	0,15	3,45	0,02
PH	10	3,7	4,4	4,15	0,21	5,11	0,04
GW	10	6,2	7,0	6,59	0,21	3,15	0,04
DH	9	2,6	2,9	2,76	0,13	4,84	0,02

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	6	16,6	17,9	17,12	0,56	3,29	0,32
PW	6	4,4	4,8	4,63	0,14	2,95	0,02
PH	6	4,0	4,7	4,43	0,25	5,65	0,06
GW	6	6,5	7,1	6,87	0,24	3,53	0,06
DH	6	2,7	3,0	2,92	0,13	4,56	0,02

*Falco columbarius – Phalanx proximalis digiti majoris*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	16	12,6	13,8	13,06	0,31	2,37	0,10
PW	16	3,5	3,9	3,74	0,11	2,92	0,01
PH	16	3,4	4,0	3,73	0,17	4,56	0,03
GW	15	5,1	5,7	5,43	0,16	2,91	0,02
DH	15	2,1	2,4	2,31	0,09	3,96	0,01

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	21	13,2	15,7	14,35	0,50	3,52	0,25
PW	21	3,7	4,1	3,94	0,10	2,47	0,01
PH	21	3,8	4,3	4,05	0,14	3,46	0,02
GW	21	5,4	6,1	5,68	0,21	3,76	0,05
DH	20	2,3	2,7	2,51	0,09	3,48	0,01

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	14,5	14,7	14,60	–	–	–
PW	2	4,0	4,0	4,00	–	–	–
PH	2	4,1	4,1	4,10	–	–	–
GW	2	5,5	5,6	5,55	–	–	–
DH	2	2,5	2,5	2,50	–	–	–

*Falco tinnunculus- Phalanx proximalis digiti majoris*

Table 11

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	13	13,8	16,5	14,82	0,76	5,11	0,57
PW	13	3,7	4,3	3,95	0,14	3,67	0,02
PH	13	3,7	4,3	4,00	0,18	4,45	0,03
GW	13	5,7	6,3	6,01	0,18	3,02	0,03
DH	13	2,5	3,0	2,74	0,15	5,48	0,02

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	24	13,7	16,8	15,34	0,79	5,16	0,63
PW	24	3,9	4,4	4,10	0,13	3,30	0,02
PH	24	3,9	4,5	4,18	0,17	4,03	0,03
GW	24	5,7	6,7	6,19	0,26	4,19	0,07
DH	24	2,6	3,0	2,85	0,13	4,75	0,02

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	14	13,5	15,9	15,07	0,65	4,30	0,42
PW	14	3,7	4,4	4,00	0,19	4,80	0,04
PH	14	3,8	4,4	4,10	0,14	3,45	0,02
GW	14	5,8	6,4	6,12	0,22	3,63	0,05
DH	14	2,6	3,0	2,84	0,11	3,83	0,01

*Falco vespertinus – Phalanx proximalis digiti majoris*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	10	13,1	14,8	13,92	0,53	3,78	0,28
PW	10	3,4	3,8	3,65	0,12	3,23	0,01
PH	10	3,6	4,0	3,80	0,14	3,72	0,02
GW	10	5,5	5,8	5,67	0,12	2,04	0,01
DH	10	2,5	2,7	2,61	0,06	2,17	0,00

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	14	13,4	15,2	14,34	0,61	4,28	0,38
PW	14	3,6	4,0	3,80	0,14	3,72	0,02
PH	14	3,6	4,3	3,85	0,22	5,83	0,05
GW	14	5,4	6,2	5,82	0,23	3,88	0,05
DH	14	2,5	2,9	2,69	0,12	4,48	0,01

*Falco vespertinus – Phalanx proximalis digiti majoris*

Table 11

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	13,0	14,2	13,79	0,48	3,49	0,23
PW	7	3,5	3,8	3,61	0,11	2,96	0,01
PH	7	3,4	3,9	3,67	0,15	4,07	0,02
GW	7	5,5	5,9	5,70	0,15	2,68	0,02
DH	7	2,4	2,7	2,53	0,09	3,76	0,01

*Falco naumanni – Phalanx proximalis digiti majoris*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	14,00	–	–	–
PW	1	–	–	3,40	–	–	–
PH	1	–	–	3,60	–	–	–
GW	1	–	–	5,50	–	–	–
DH	–	–	–	–	–	–	–

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	13,80	–	–	–
PW	1	–	–	3,60	–	–	–
PH	1	–	–	3,50	–	–	–
GW	1	–	–	5,40	–	–	–
DH	–	–	–	–	–	–	–

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	13,20	–	–	–
PW	1	–	–	3,40	–	–	–
PH	1	–	–	3,40	–	–	–
GW	1	–	–	5,00	–	–	–
DH	1	–	–	2,30	–	–	–

*Falco subbuteo – Phalanx distalis digiti majoris*

Table 12

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	9	14,4	15,7	15,08	0,53	3,51	0,28
PW	10	2,7	3,1	2,89	0,12	4,14	0,01
PH	10	3,9	4,1	4,03	0,07	1,67	0,00

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	6	15,6	16,5	16,17	0,37	2,30	0,14
PW	6	3,0	3,4	3,17	0,16	5,16	0,03
PH	6	4,2	4,6	4,42	0,13	3,01	0,02

*Falco columbarius – Phalanx distalis digiti majoris*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	11	10,5	11,8	11,24	0,37	3,26	0,13
PW	12	2,2	2,6	2,45	0,12	4,77	0,01
PH	12	3,1	3,6	3,39	0,13	3,87	0,02

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	19	11,9	13,3	12,48	0,34	2,76	0,12
PW	19	2,5	2,8	2,64	0,08	3,17	0,01
PH	19	3,3	3,9	3,69	0,14	3,93	0,02

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	11,60	–	–	–
PW	1	–	–	2,50	–	–	–
PH	1	–	–	3,40	–	–	–

*Falco tinnunculus – Phalanx distalis digiti majoris*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	9	13,0	15,1	13,87	0,56	4,01	0,31
PW	10	2,6	3,0	2,77	0,12	4,52	0,02
PH	10	3,5	3,9	3,63	0,16	4,32	0,02

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	20	12,6	15,5	13,89	0,76	5,47	0,58
PW	20	2,6	3,1	2,88	0,16	5,42	0,02
PH	20	3,5	4,1	3,77	0,14	3,83	0,02



?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	12	13,0	15,0	13,97	0,68	4,88	0,47
PW	12	2,8	3,0	2,88	0,07	2,49	0,00
PH	12	3,6	3,8	3,68	0,09	2,54	0,01

*Falco vespertinus – Phalanx distalis digiti majoris*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	12,8	14,1	13,46	0,47	3,48	0,22
PW	8	2,5	2,7	2,62	0,07	2,69	0,00
PH	8	3,4	3,7	3,56	0,11	2,98	0,01

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	12	13,2	14,7	13,92	0,45	3,21	0,20
PW	12	2,4	2,9	2,68	0,13	4,98	0,02
PH	12	3,4	4,0	3,66	0,16	4,43	0,03

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	6	12,6	14,1	13,47	0,51	3,81	0,26
PW	6	2,5	2,7	2,57	0,08	3,18	0,01
PH	6	3,5	3,7	3,60	0,06	1,76	0,00

*Falco naumanni – Phalanx distalis digiti majoris*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	14,00	–	–	–
PW	1	–	–	2,50	–	–	–
PH	1	–	–	3,60	–	–	–

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	13,80	–	–	–
PW	1	–	–	2,50	–	–	–
PH	1	–	–	3,50	–	–	–

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	–	–	–	–
PW	1	–	–	2,30	–	–	–
PH	1	–	–	3,20	–	–	–

*Falco subbuteo – Phalanx digiti minoris*

Table 13

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	8	6,3	7,8	7,22	0,54	7,46	0,29
PW	8	1,6	2,1	1,94	0,17	8,70	0,03
GW	8	1,9	2,4	2,10	0,18	8,44	0,03
GH	8	1,4	1,7	1,55	0,09	5,97	0,01

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	6	7,4	8,0	7,68	0,25	3,23	0,06
PW	6	1,7	2,2	1,97	0,19	9,47	0,03
GW	6	2,0	2,4	2,23	0,19	8,34	0,03
GH	6	1,5	1,8	1,58	0,12	7,38	0,02

*Falco columbarius – Phalanx digiti minoris*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	14	5,0	6,2	5,67	0,29	5,19	0,09
PW	14	1,5	1,8	1,63	0,07	4,46	0,00
GW	14	1,4	1,9	1,59	0,12	7,36	0,01
GH	14	1,0	1,4	1,23	0,13	10,31	0,02

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	19	5,8	7,1	6,53	0,33	5,10	0,11
PW	19	1,6	2,0	1,80	0,12	6,93	0,02
GW	19	1,5	2,0	1,76	0,13	7,37	0,02
GH	19	1,2	1,5	1,33	0,08	6,16	0,01

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	5,9	6,7	6,30	–	–	–
PW	2	1,6	1,9	1,75	–	–	–
GW	2	1,6	1,9	1,75	–	–	–
GH	2	1,1	1,3	1,20	–	–	–

*Falco tinnunculus – Phalanx digiti minoris*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	9	6,1	7,5	6,99	0,39	5,61	0,15
PW	9	1,6	2,0	1,78	0,14	7,84	0,02
GW	9	1,8	2,2	2,03	0,12	6,02	0,01
GH	9	1,1	1,3	1,26	0,07	5,79	0,00

*Falco tinnunculus – Phalanx digiti minoris*

Table 13

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	10	5,7	8,0	6,86	0,68	9,99	0,47
PW	10	1,7	2,1	1,88	0,13	7,00	0,02
GW	10	1,8	2,3	2,06	0,14	6,94	0,02
GH	9	1,2	1,4	1,31	0,06	4,58	0,00

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	9	6,7	7,8	7,09	0,34	4,81	0,12
PW	9	1,6	2,1	1,87	0,14	7,58	0,02
GW	9	2,0	2,3	2,14	0,10	4,73	0,01
GH	9	1,2	1,5	1,32	0,08	6,30	0,01

*Falco vespertinus – Phalanx digiti minoris*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	5,9	7,0	6,41	0,38	5,86	0,14
PW	7	1,5	1,7	1,61	0,09	5,57	0,01
GW	7	1,5	2,0	1,77	0,19	10,67	0,04
GH	7	1,1	1,2	1,13	0,05	4,32	0,00

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	6	6,0	7,1	6,45	0,42	6,56	0,18
PW	6	1,6	1,9	1,75	0,10	5,99	0,01
GW	6	1,8	2,2	2,00	0,17	8,37	0,03
GH	6	1,2	1,3	1,25	0,05	4,38	0,00

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	6	5,5	6,8	6,15	0,48	7,75	0,23
PW	6	1,4	1,7	1,58	0,12	7,38	0,01
GW	6	1,4	1,9	1,72	0,19	11,31	0,04
GH	6	1,0	1,4	1,15	0,16	14,29	0,03

*Falco naumanni – Phalanx digiti minoris*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	6,60	–	–	–
PW	1	–	–	1,80	–	–	–
GW	1	–	–	2,00	–	–	–
GH	1	–	–	1,20	–	–	–

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	6,00	–	–	–
PW	1	–	–	1,70	–	–	–
GW	1	–	–	1,90	–	–	–
GH	1	–	–	1,10	–	–	–

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	5,80	–	–	–
PW	1	–	–	1,60	–	–	–
GW	1	–	–	1,60	–	–	–
GH	1	–	–	1,00	–	–	–

*Falco subbuteo – Sternum*

Table 14

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	14	40,2	47,0	43,34	1,81	4,17	3,26
CL	13	40,7	45,8	43,34	1,64	3,79	2,70
CH	14	19,1	21,3	20,44	0,59	2,90	0,35
CW	12	19,9	23,0	21,27	0,86	4,05	0,74
MW	14	22,9	26,0	24,51	0,95	3,87	0,90

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	9	42,5	49,4	45,93	1,96	4,28	3,86
CL	9	41,5	49,4	45,43	2,40	5,28	5,75
CH	10	20,3	23,1	21,20	0,84	3,97	0,71
CW	10	21,8	24,0	23,06	0,68	2,96	0,47
MW	9	24,4	29,4	26,62	1,50	5,63	2,25

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	3	43,3	44,3	43,87	0,51	1,17	0,26
CL	3	42,9	44,7	43,83	0,90	2,06	0,81
CH	3	20,3	21,2	20,83	0,47	2,27	0,22
CW	2	21,1	22,0	21,55	–	–	–
MW	3	24,4	26,5	25,73	1,16	4,50	1,34

*Falco columbarius – Sternum*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	15	37,6	41,1	39,60	1,13	2,86	1,28
CL	14	37,4	41,3	39,49	1,16	2,94	1,35
CH	15	17,8	19,4	18,46	0,48	2,63	0,23
CW	14	19,1	22,8	20,52	1,07	5,20	1,14
MW	14	22,9	25,1	23,79	0,62	2,62	0,39

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	20	40,2	46,4	42,31	1,53	3,61	2,34
CL	21	40,0	46,1	42,03	1,53	3,63	2,33
CH	21	18,5	21,3	19,75	0,73	3,72	0,54
CW	19	20,8	22,6	21,63	0,59	2,74	0,35
MW	19	24,1	26,8	25,63	0,72	2,79	0,51

*Falco columbarius – Sternum*

Table 14

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	40,1	40,8	40,45	–	–	–
CL	2	39,9	41,4	40,65	–	–	–
CH	2	18,8	19,5	19,15	–	–	–
CW	2	19,4	20,5	19,95	–	–	–
MW	2	24,2	24,4	24,30	–	–	–

*Falco eleonora – Sternum*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	49,80	–	–	–
CL	1	–	–	49,80	–	–	–
CH	1	–	–	23,60	–	–	–
CW	–	–	–	–	–	–	–
MW	1	–	–	29,40	–	–	–

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	52,0	52,3	52,15	–	–	–
CL	2	49,0	51,7	50,35	–	–	–
CH	2	21,8	23,9	22,85	–	–	–
CW	–	–	–	–	–	–	–
MW	–	–	–	–	–	–	–

*Falco tinnunculus – Sternum*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	22	34,4	39,1	36,94	1,36	3,67	1,84
CL	22	29,1	37,4	33,12	1,98	5,96	3,90
CH	22	15,5	18,0	16,73	0,71	4,26	0,51
CW	22	19,0	22,8	20,76	1,03	4,96	1,06
MW	22	22,1	26,1	23,69	1,06	4,50	1,13

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	23	36,0	40,5	37,80	1,03	2,72	1,06
CL	23	32,2	35,9	33,84	0,95	2,82	0,91
CH	23	15,5	18,2	16,96	0,64	3,80	0,42
CW	21	19,8	22,5	21,00	0,71	3,39	0,51
MW	22	22,6	26,2	24,34	0,94	3,86	0,88

*Falco tinnunculus – Sternum*

Table 14

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	16	32,7	40,0	36,95	2,01	5,44	4,04
CL	16	29,1	36,2	33,11	2,19	6,62	4,81
CH	16	14,3	18,4	16,60	1,20	7,20	1,43
CW	15	19,8	21,9	20,57	0,55	2,69	0,31
MW	16	23,0	25,7	23,97	0,70	2,92	0,49

*Falco vespertinus – Sternum*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	11	32,3	36,7	34,68	1,34	3,88	1,81
CL	11	29,4	33,8	31,84	1,55	4,88	2,41
CH	11	14,0	16,1	15,26	0,73	4,82	0,54
CW	11	17,7	20,0	18,73	0,65	3,45	0,42
MW	11	19,9	21,7	20,89	0,59	2,80	0,34

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	13	32,5	37,5	34,88	1,36	3,89	1,84
CL	13	28,6	35,5	31,74	1,68	5,29	2,82
CH	13	14,2	16,9	15,31	0,71	4,62	0,50
CW	11	18,2	20,0	19,12	0,64	3,35	0,41
MW	11	20,0	22,7	21,53	0,71	3,31	0,51

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	32,3	36,5	34,63	1,65	4,76	2,72
CL	7	28,4	33,6	31,84	1,97	6,18	3,87
CH	7	14,4	16,1	15,27	0,62	4,03	0,38
CW	5	18,0	19,2	18,70	0,47	2,51	0,22
MW	6	20,3	21,7	21,27	0,50	2,35	0,25

*Falco naumanni – Sternum*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	3	31,0	32,7	32,03	0,91	2,83	0,82
CL	3	27,2	30,2	29,03	1,61	5,54	2,58
CH	3	14,3	14,9	14,57	0,31	2,10	0,09
CW	3	17,2	19,3	18,17	1,06	5,83	1,12
MW	3	18,5	21,3	20,20	1,49	7,39	2,23

*Falco naumanni – Sternum*

Table 14

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	32,2	32,4	32,30	–	–	–
CL	2	29,4	30,2	29,80	–	–	–
CH	2	14,3	15,2	14,75	–	–	–
CW	2	18,8	19,3	19,05	–	–	–
MW	2	20,7	21,8	21,25	–	–	–

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	–	–	–	–	–	–	–
CL	–	–	–	–	–	–	–
CH	–	–	–	–	–	–	–
CW	1	–	–	20,50	–	–	–
MW	1	–	–	20,80	–	–	–



*Falco subbuteo – Pelvis*

Table 15

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
ML	13	31,6	35,1	33,15	1,24	3,73	1,53
MW	13	12,6	15,5	13,96	0,89	6,37	0,79
AW	14	25,1	27,5	26,28	0,75	2,86	0,57
AA	14	17,4	20,2	18,82	0,72	3,84	0,52
GW	12	24,5	27,5	25,67	0,99	3,87	0,99
AD	14	2,9	3,7	3,39	0,21	6,17	0,04

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
ML	11	33,2	37,2	35,43	1,11	3,15	1,24
MW	11	13,2	16,6	14,99	0,96	6,43	0,93
AW	10	26,6	29,0	28,17	0,88	3,13	0,78
AA	10	19,3	21,0	20,33	0,64	3,13	0,40
GW	10	26,1	30,6	28,38	1,31	4,63	1,73
AD	11	3,3	4,2	3,69	0,23	6,11	0,05

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
ML	2	33,6	34,7	34,15	–	–	–
MW	2	13,8	14,7	14,25	–	–	–
AW	2	25,9	26,6	26,25	–	–	–
AA	2	18,5	18,5	18,50	–	–	–
GW	2	26,5	26,5	26,50	–	–	–
AD	2	3,7	3,8	3,75	–	–	–

*Falco columbarius – Pelvis*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
ML	16	28,4	31,8	30,27	0,96	3,17	0,92
MW	16	11,8	13,7	12,71	0,56	4,38	0,31
AW	16	23,6	25,6	24,66	0,59	2,38	0,34
AA	16	16,8	18,2	17,47	0,44	2,50	0,19
GW	15	22,0	25,2	23,67	0,91	3,83	0,82
AD	16	3,0	3,6	3,39	0,15	4,50	0,02

*Falco columbarius – Pelvis*

Table 15

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
ML	19	30,8	35,9	33,54	1,28	3,82	1,64
MW	19	12,4	14,6	13,73	0,52	4,24	0,34
AW	19	25,9	27,4	26,63	0,50	1,88	0,25
AA	19	18,0	19,6	18,78	0,49	2,61	0,24
GW	18	23,5	28,0	25,43	1,03	4,07	1,07
AD	20	3,4	4,1	3,69	0,18	4,89	0,03

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
ML	2	31,3	32,0	31,65	–	–	–
MW	2	12,7	13,1	12,90	–	–	–
AW	1	–	–	26,70	–	–	–
AA	1	–	–	17,90	–	–	–
GW	1	–	–	25,30	–	–	–
AD	2	3,6	3,8	3,70	–	–	–

*Falco eleonorae – Pelvis*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
ML	1	–	–	38,10	–	–	–
MW	1	–	–	16,20	–	–	–
AW	–	–	–	–	–	–	–
AA	–	–	–	–	–	–	–
GW	–	–	–	–	–	–	–
AD	1	–	–	4,00	–	–	–

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
ML	2	36,0	40,4	38,20	–	–	–
MW	1	–	–	16,60	–	–	–
AW	2	30,0	31,7	30,85	–	–	–
AA	1	–	–	22,80	–	–	–
GW	1	–	–	30,50	–	–	–
AD	1	–	–	4,00	–	–	–

*Falco tinnunculus – Pelvis*

Table 15

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
ML	20	31,2	35,1	32,76	1,07	3,28	1,15
MW	20	11,9	15,2	13,37	0,71	5,31	0,50
AW	20	23,0	26,3	24,84	0,89	3,60	0,80
AA	20	16,0	18,6	17,35	0,77	4,43	0,59
GW	20	20,7	24,8	22,63	1,14	5,04	1,30
AD	20	3,2	3,8	3,55	0,17	4,88	0,03

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
ML	28	29,3	38,6	34,19	1,62	4,74	2,63
MW	28	12,1	14,6	13,32	0,63	4,72	0,40
AW	27	23,0	27,9	25,65	1,10	4,27	1,20
AA	27	15,3	19,9	17,92	0,96	5,35	0,92
GW	27	20,6	26,3	23,44	1,54	6,58	2,38
AD	28	3,2	4,1	3,65	0,20	5,56	0,04

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
ML	14	31,4	35,1	33,00	1,22	3,68	1,48
MW	14	12,5	13,9	13,26	0,50	3,81	0,25
AW	14	24,3	27,0	25,34	0,66	2,60	0,43
AA	14	16,9	18,8	17,69	0,60	3,40	0,36
GW	12	21,1	25,2	23,27	1,30	5,58	1,69
AD	14	3,3	3,9	3,59	0,20	5,51	0,04

*Falco vespertinus – Pelvis*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
ML	11	29,0	31,4	30,26	0,81	2,69	0,66
MW	11	12,4	14,1	13,29	0,59	4,41	0,34
AW	11	21,9	23,1	22,57	0,43	1,91	0,19
AA	11	15,7	19,0	16,83	0,84	4,99	0,70
GW	11	21,8	23,6	22,63	0,57	2,52	0,33
AD	11	2,6	3,1	2,82	0,15	5,45	0,02

*Falco vespertinus – Pelvis*

Table 15

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
ML	11	26,9	32,2	30,43	1,88	6,20	3,55
MW	12	12,2	14,8	13,28	0,64	4,81	0,41
AW	12	21,6	24,6	23,02	0,93	4,06	0,87
AA	12	15,6	18,5	17,14	0,98	5,73	0,97
GW	11	20,6	25,7	23,44	1,56	6,64	2,42
AD	12	2,6	3,2	2,90	0,15	5,09	0,02

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
ML	6	28,6	32,6	30,27	1,57	5,18	2,45
MW	6	12,2	13,6	13,02	0,51	3,96	0,27
AW	6	21,9	23,5	22,88	0,54	2,35	0,29
AA	6	15,8	18,2	17,17	0,81	4,73	0,66
GW	6	22,7	24,5	23,63	0,75	3,16	0,56
AD	6	2,7	3,1	2,92	0,17	5,90	0,03

*Falco naumanni – Pelvis*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
ML	2	29,0	30,3	29,65	–	–	–
MW	1	–	–	13,20	–	–	–
AW	2	22,6	24,5	23,55	–	–	–
AA	1	–	–	17,70	–	–	–
GW	1	–	–	22,40	–	–	–
AD	1	–	–	2,80	–	–	–

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
ML	2	29,4	30,0	29,70	–	–	–
MW	2	11,6	12,0	11,80	–	–	–
AW	2	23,5	23,7	23,60	–	–	–
AA	2	16,9	17,8	17,35	–	–	–
GW	2	20,9	22,6	21,75	–	–	–
AD	2	2,8	2,8	2,80	–	–	–

**Falco naumanni – Pelvis***Table 15*

<b>?</b>	<b>n</b>	<b>min.</b>	<b>max.</b>	$\bar{x}$	<b>S</b>	<b>S%</b>	<b>S<sup>2</sup></b>
<b>ML</b>	1	–	–	31,00	–	–	–
<b>MW</b>	1	–	–	14,60	–	–	–
<b>AW</b>	–	–	–	–	–	–	–
<b>AA</b>	–	–	–	–	–	–	–
<b>GW</b>	–	–	–	–	–	–	–
<b>AD</b>	1	–	–	3,00	–	–	–

*Falco subbuteo – Pygostylus*

Table 16

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	9	14,6	16,6	15,57	0,62	4,00	0,39
DL	9	7,6	9,0	8,49	0,45	5,32	0,20
GW	10	5,0	6,3	5,72	0,49	8,52	0,24
GH	10	5,5	7,1	6,41	0,46	7,22	0,21

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	4	16,7	18,5	17,47	0,83	4,77	0,70
DL	4	8,0	10,7	9,80	1,24	12,61	1,53
GW	4	5,4	6,3	5,82	0,40	6,92	0,16
GH	5	6,1	7,3	6,76	0,47	6,91	0,22

*Falco columbarius – Pygostylus*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	13	13,1	14,0	13,61	0,27	1,98	0,07
DL	13	6,7	8,0	7,49	0,39	5,18	0,15
GW	13	4,2	5,2	4,67	0,26	5,62	0,07
GH	12	5,1	6,5	5,65	0,38	6,77	0,15

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	17	14,2	15,9	14,75	0,44	2,96	0,19
DL	17	6,8	8,9	7,82	0,55	7,01	0,30
GW	19	4,2	5,8	5,00	0,42	8,46	0,18
GH	19	5,3	6,4	5,94	0,34	5,70	0,11

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	14,1	14,5	14,30	–	–	–
DL	2	7,0	7,6	7,30	–	–	–
GW	2	5,0	5,2	5,10	–	–	–
GH	2	5,9	6,1	6,00	–	–	–

*Falco tinnunculus – Pygostylus*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	10	13,1	15,9	14,67	0,76	5,18	0,58
DL	10	7,5	8,9	8,12	0,46	5,68	0,21
GW	10	4,0	5,2	4,57	0,37	8,19	0,14
GH	10	5,2	6,4	5,81	0,38	6,51	0,14

*Falco tinnunculus – Pygostylus*

Table 16

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	14	14,4	17,5	15,64	0,85	5,44	0,72
DL	13	7,5	10,1	8,78	0,71	8,05	0,50
GW	16	4,4	5,5	4,87	0,34	6,93	0,11
GH	15	5,5	7,2	6,09	0,54	8,93	0,30

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	9	13,2	16,2	15,13	0,87	5,74	0,75
DL	9	7,6	9,3	8,08	0,55	6,80	0,30
GW	10	3,6	5,6	4,52	0,52	11,46	0,27
GH	10	5,5	6,6	6,01	0,31	5,11	0,09

*Falco vespertinus – Pygostylus*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	5	12,5	15,3	13,86	1,05	7,59	1,11
DL	5	7,0	8,7	7,44	0,71	9,58	0,51
GW	5	3,8	4,7	4,24	0,36	8,60	0,13
GH	5	5,1	5,6	5,32	0,26	4,86	0,07

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	5	11,7	15,4	13,72	1,63	11,89	2,66
DL	5	5,4	8,3	6,98	1,11	15,90	1,23
GW	5	3,8	4,6	4,14	0,30	7,16	0,09
GH	5	4,3	6,2	5,22	0,78	14,92	0,61

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	4	13,2	14,7	13,60	0,73	5,40	0,54
DL	2	5,8	6,8	6,30	–	–	–
GW	4	3,4	5,0	4,10	0,68	16,66	0,47
GH	4	4,8	5,8	5,25	0,44	8,45	0,20

*Falco naumanni – Pygostylus*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	12,40	–	–	–
DL	1	–	–	7,70	–	–	–
GW	1	–	–	3,80	–	–	–
GH	1	–	–	5,50	–	–	–

*Falco naumanni – Pygostylus*

Table 16

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	-	-	12,70	-	-	-
DL	1	-	-	6,80	-	-	-
GW	1	-	-	4,00	-	-	-
GH	1	-	-	5,70	-	-	-



*Falco subbuteo – Femur*

Table 17

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	13	40,8	44,9	43,13	1,02	2,36	1,04
ML	13	39,0	43,0	41,43	1,01	2,44	1,03
PW	13	7,2	7,8	7,56	0,20	2,62	0,04
PH	12	4,8	5,6	5,25	0,25	4,84	0,06
CD	13	3,1	3,6	3,38	0,15	4,49	0,02
CW	13	3,4	3,8	3,60	0,15	4,09	0,02
DW	13	7,1	7,8	7,58	0,19	2,57	0,04
DH	13	6,2	6,8	6,45	0,21	3,26	0,04

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	11	43,5	46,8	45,14	0,89	1,96	0,79
ML	11	41,5	45,1	43,37	0,96	2,22	0,93
PW	11	7,6	8,3	7,93	0,19	2,46	0,04
PH	11	5,1	5,9	5,53	0,25	4,51	0,06
CD	11	3,4	3,9	3,57	0,13	3,77	0,02
CW	11	3,7	4,1	3,90	0,14	3,63	0,02
DW	11	7,7	8,6	7,98	0,25	3,16	0,06
DH	11	6,2	7,2	6,71	0,31	4,59	0,09

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	45,20	–	–	–
ML	1	–	–	43,60	–	–	–
PW	2	7,5	7,8	7,65	–	–	–
PH	2	5,2	5,3	5,25	–	–	–
CD	2	3,5	3,6	3,55	–	–	–
CW	1	–	–	3,70	–	–	–
DW	1	–	–	7,80	–	–	–
DH	1	–	–	6,50	–	–	–

*Falco columbarius – Femur*

Table 17

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	16	41,9	45,1	43,63	0,86	1,97	0,74
ML	16	40,3	43,6	42,29	0,93	2,20	0,87
PW	16	6,4	7,3	6,98	0,21	3,01	0,04
PH	16	4,4	4,9	4,65	0,13	2,83	0,02
CD	16	3,0	3,5	3,24	0,13	3,89	0,02
CW	16	3,2	3,6	3,42	0,11	3,29	0,01
DW	16	6,7	7,3	6,99	0,19	2,66	0,03
DH	16	5,5	6,2	5,91	0,20	3,38	0,04

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	21	44,4	49,2	46,71	0,97	2,08	0,94
ML	21	43,2	48,0	45,36	0,95	2,09	0,90
PW	21	7,2	8,0	7,55	0,20	2,60	0,04
PH	21	5,0	5,8	5,24	0,21	4,03	0,04
CD	21	3,3	3,8	3,52	0,14	4,10	0,02
CW	21	3,3	4,0	3,66	0,17	4,54	0,03
DW	21	7,1	8,0	7,58	0,23	3,03	0,05
DH	21	5,9	6,7	6,25	0,20	3,19	0,04

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	44,6	45,9	45,25	–	–	–
ML	2	43,3	44,8	44,05	–	–	–
PW	2	6,8	7,5	7,15	–	–	–
PH	2	4,9	5,2	5,05	–	–	–
CD	2	3,3	3,4	3,35	–	–	–
CW	2	3,6	3,7	3,65	–	–	–
DW	2	7,1	7,5	7,30	–	–	–
DH	2	6,1	6,2	6,15	–	–	–

*Falco eleonorae – Femur*

Table 17

$\sigma$	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	49,50	–	–	–
ML	1	–	–	47,50	–	–	–
PW	1	–	–	8,70	–	–	–
PH	1	–	–	5,90	–	–	–
CD	1	–	–	3,70	–	–	–
CW	1	–	–	4,20	–	–	–
DW	1	–	–	8,80	–	–	–
DH	1	–	–	7,10	–	–	–

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	47,6	49,0	48,30	–	–	–
ML	2	45,7	47,5	46,60	–	–	–
PW	2	8,8	9,6	9,20	–	–	–
PH	1	–	–	5,90	–	–	–
CD	1	–	–	4,00	–	–	–
CW	2	3,8	3,9	3,85	–	–	–
DW	2	8,8	9,1	8,95	–	–	–
DH	1	–	–	7,70	–	–	–

*Falco tinnunculus – Femur*

$\sigma$	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	21	42,8	47,0	44,40	1,02	2,31	1,05
ML	21	41,5	45,2	43,07	0,96	2,22	0,91
PW	21	6,8	7,9	7,54	0,27	3,62	0,07
PH	21	5,0	5,9	5,48	0,25	4,53	0,06
CD	21	3,1	3,8	3,51	0,16	4,70	0,03
CW	21	3,2	3,8	3,53	0,15	4,32	0,02
DW	21	6,8	7,7	7,48	0,27	3,59	0,07
DH	21	5,3	6,5	5,97	0,29	4,90	0,08

*Falco tinnunculus – Femur*

Table 17

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	26	41,6	47,6	44,67	1,46	3,27	2,13
ML	26	40,4	46,3	43,29	1,45	3,35	2,10
PW	26	7,2	8,5	7,72	0,32	4,18	0,10
PH	26	5,3	6,3	5,70	0,24	4,28	0,06
CD	26	3,3	4,0	3,63	0,18	5,03	0,03
CW	26	3,2	4,3	3,62	0,24	6,64	0,06
DW	26	7,2	8,3	7,73	0,31	4,04	0,10
DH	26	5,5	6,6	6,14	0,30	4,83	0,09

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	14	42,6	45,7	44,21	1,00	2,27	1,01
ML	14	41,5	44,5	42,88	1,00	2,32	0,99
PW	15	7,2	8,0	7,59	0,23	3,07	0,05
PH	15	5,2	6,0	5,55	0,24	4,30	0,06
CD	15	3,4	3,8	3,59	0,12	3,24	0,01
CW	15	3,3	3,8	3,61	0,16	4,54	0,03
DW	15	7,3	8,0	7,61	0,23	2,97	0,05
DH	15	5,8	6,5	6,04	0,20	3,24	0,04

*Falco vespertinus – Femur*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	11	35,0	38,4	36,60	1,01	2,77	1,03
ML	11	33,6	37,2	35,39	1,03	2,91	1,06
PW	11	5,8	6,6	6,17	0,24	3,84	0,06
PH	11	4,3	5,1	4,63	0,24	5,21	0,06
CD	11	2,6	2,9	2,78	0,09	3,14	0,01
CW	11	2,6	3,1	2,92	0,15	5,27	0,02
DW	11	5,9	6,5	6,26	0,23	3,66	0,05
DH	11	5,0	5,6	5,22	0,21	4,00	0,04

*Falco vespertinus – Femur*

Table 17

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	14	35,1	38,9	36,80	1,02	2,78	1,04
ML	14	33,8	37,5	35,40	1,03	2,90	1,05
PW	14	6,0	6,9	6,39	0,28	4,44	0,08
PH	14	4,2	5,3	4,76	0,29	6,15	0,09
CD	14	2,7	3,2	2,91	0,13	4,57	0,02
CW	14	2,7	3,2	3,01	0,15	5,13	0,02
DW	14	6,1	6,8	6,44	0,22	3,43	0,05
DH	14	5,0	5,9	5,41	0,23	4,28	0,05

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	35,3	37,8	36,71	0,97	2,66	0,95
ML	7	34,3	36,4	35,40	0,82	2,32	0,67
PW	7	5,8	6,2	6,03	0,15	2,48	0,02
PH	7	4,3	4,9	4,57	0,21	4,68	0,05
CD	7	2,6	3,0	2,79	0,13	4,83	0,02
CW	7	2,8	3,0	2,86	0,08	2,75	0,01
DW	7	5,8	6,5	6,17	0,22	3,59	0,05
DH	7	5,0	5,5	5,19	0,17	3,23	0,03

*Falco naumanni – Femur*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	3	34,2	36,7	35,77	1,36	3,82	1,86
ML	3	33,1	35,6	34,53	1,29	3,73	1,66
PW	3	6,0	6,7	6,27	0,38	6,04	0,14
PH	2	4,8	5,0	4,90	–	–	–
CD	3	2,9	3,0	2,97	0,06	1,95	0,00
CW	3	2,6	3,1	2,90	0,26	9,12	0,07
DW	3	6,0	7,0	6,40	0,53	8,27	0,28
DH	3	4,9	5,3	5,13	0,21	4,05	0,04

*Falco naumanni – Femur*

Table 17

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	35,40	–	–	–
ML	1	–	–	33,90	–	–	–
PW	2	6,1	6,3	6,20	–	–	–
PH	2	4,6	4,7	4,65	–	–	–
CD	2	2,8	3,0	2,90	–	–	–
CW	2	3,0	3,0	3,00	–	–	–
DW	1	–	–	6,30	–	–	–
DH	1	–	–	5,00	–	–	–

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	–	–	–	–	–	–	–
ML	–	–	–	–	–	–	–
PW	1	–	–	6,10	–	–	–
PH	1	–	–	4,50	–	–	–
CD	1	–	–	2,90	–	–	–
CW	1	–	–	2,90	–	–	–
DW	1	–	–	5,80	–	–	–
DH	–	–	–	–	–	–	–

*Falco subbuteo – Tibiotarsus*

Table 18

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	10	54,2	57,2	55,91	1,15	2,07	1,33
PT	10	8,1	8,9	8,44	0,28	3,27	0,08
CW	11	2,7	3,1	2,94	0,13	4,39	0,02
CT	11	2,5	2,9	2,72	0,14	5,15	0,02
DW	11	6,6	7,0	6,80	0,13	1,86	0,02
DH	11	4,7	5,4	5,13	0,19	3,71	0,04

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	6	57,9	60,6	59,33	1,18	1,99	1,39
PT	6	8,6	9,4	9,07	0,28	3,09	0,08
CW	6	3,0	3,7	3,33	0,24	7,27	0,06
CT	6	2,7	3,1	2,92	0,16	5,49	0,03
DW	6	6,5	8,0	7,48	0,53	7,14	0,29
DH	6	4,8	5,7	5,48	0,35	6,36	0,12

*Falco columbarius – Tibiotarsus*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	15	51,8	55,6	54,27	0,94	1,73	0,88
PT	15	7,9	8,4	8,07	0,16	1,96	0,02
CW	15	2,5	2,9	2,71	0,12	4,38	0,01
CT	15	2,2	2,7	2,53	0,13	5,10	0,02
DW	16	6,1	6,8	6,49	0,17	2,63	0,03
DH	16	4,8	5,2	4,97	0,10	2,01	0,01

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	20	56,8	61,2	58,43	1,16	1,98	1,34
PT	20	8,2	9,2	8,71	0,25	2,87	0,06
CW	19	2,6	3,2	2,96	0,15	5,18	0,02
CT	20	2,4	2,9	2,71	0,15	5,60	0,02
DW	20	6,8	7,6	7,10	0,22	3,10	0,05
DH	20	5,0	6,0	5,39	0,22	4,05	0,05

*Falco columbarius – Tibiotarsus*

Table 18

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	56,0	57,6	56,80	–	–	–
PT	2	8,3	8,7	8,50	–	–	–
CW	2	2,8	2,9	2,85	–	–	–
CT	2	2,5	2,6	2,55	–	–	–
DW	2	6,4	6,9	6,65	–	–	–
DH	2	4,9	5,2	5,05	–	–	–

*Falco eleonora* – Tibiotarsus

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	63,40	–	–	–
PT	1	–	–	9,80	–	–	–
CW	1	–	–	3,50	–	–	–
CT	1	–	–	3,20	–	–	–
DW	1	–	–	7,70	–	–	–
DH	–	–	–	–	–	–	–

*Falco tinnunculus – Tibiotarsus*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	13	55,7	61,4	58,68	1,54	2,62	2,37
PT	13	7,8	8,8	8,30	0,31	3,71	0,09
CW	13	2,8	3,3	3,04	0,16	5,30	0,03
CT	13	2,4	3,0	2,61	0,18	7,08	0,03
DW	13	6,1	7,0	6,72	0,31	4,59	0,09
DH	13	5,0	5,6	5,31	0,19	3,59	0,04

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	25	56,3	63,4	59,80	1,92	3,21	3,69
PT	25	8,1	9,3	8,69	0,40	4,57	0,16
CW	25	3,0	3,5	3,20	0,16	4,90	0,02
CT	25	2,4	2,9	2,66	0,17	6,25	0,03
DW	25	6,5	7,5	7,05	0,28	3,93	0,08
DH	25	5,0	6,1	5,58	0,22	3,99	0,05



*Falco tinnunculus – Tibiotarsus*

Table 18

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	14	55,8	61,9	58,84	1,66	2,77	2,83
PT	14	8,0	9,0	8,54	0,31	3,64	0,10
CW	14	2,8	3,4	3,15	0,21	6,68	0,04
CT	14	2,2	2,9	2,61	0,22	8,47	0,05
DW	14	6,3	7,4	6,96	0,34	4,83	0,11
DH	14	5,0	6,1	5,49	0,28	5,02	0,08

*Falco vespertinus – Tibiotarsus*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	9	46,4	49,7	48,04	1,24	2,58	1,54
PT	9	6,8	7,5	7,12	0,25	3,56	0,06
CW	9	2,3	2,7	2,53	0,15	5,92	0,02
CT	9	2,0	2,5	2,31	0,18	7,93	0,03
DW	9	5,4	6,1	5,72	0,22	3,89	0,05
DH	9	4,2	4,6	4,44	0,13	3,00	0,02

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	14	45,6	52,0	48,74	1,63	3,34	2,65
PT	14	7,0	7,9	7,46	0,23	3,10	0,05
CW	14	2,4	2,9	2,69	0,16	5,91	0,02
CT	14	2,2	2,8	2,45	0,18	7,47	0,03
DW	14	5,3	6,3	5,94	0,26	4,36	0,07
DH	14	4,2	5,0	4,65	0,20	4,36	0,04

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	47,7	50,1	48,69	0,84	1,73	0,71
PT	7	6,8	7,7	7,23	0,33	4,64	0,11
CW	8	2,5	2,7	2,57	0,07	2,75	0,00
CT	8	2,1	2,5	2,26	0,13	5,76	0,02
DW	8	5,4	5,8	5,67	0,15	2,62	0,02
DH	8	4,3	4,6	4,50	0,12	2,66	0,01

*Falco naumanni* – *Tibiotarsus*

Table 18

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	46,0	50,0	48,00	–	–	–
PT	2	6,7	6,7	6,70	–	–	–
CW	2	2,5	2,6	2,55	–	–	–
CT	2	2,3	2,4	2,35	–	–	–
DW	2	5,8	5,9	5,85	–	–	–
DH	1	–	–	4,70	–	–	–

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	47,40	–	–	–
PT	1	–	–	7,10	–	–	–
CW	1	–	–	3,00	–	–	–
CT	1	–	–	2,50	–	–	–
DW	1	–	–	5,90	–	–	–
DH	1	–	–	4,90	–	–	–

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	47,60	–	–	–
PT	1	–	–	6,80	–	–	–
CW	1	–	–	2,60	–	–	–
CT	1	–	–	2,30	–	–	–
DW	1	–	–	6,20	–	–	–
DH	1	–	–	4,80	–	–	–

*Falco subbuteo – Tarsometatarsus*

Table 19

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	11	33,0	35,3	34,41	0,79	2,29	0,62
PW	11	6,5	7,4	7,09	0,27	3,75	0,07
HH	11	4,8	5,4	5,05	0,17	3,35	0,03
FD	11	0,7	1,0	0,82	0,10	12,00	0,01
CW	11	2,4	2,7	2,56	0,10	4,01	0,01
DW	11	6,1	6,9	6,58	0,24	3,58	0,06
DT	10	6,3	6,7	6,48	0,15	2,28	0,02

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	35,1	36,0	35,64	0,30	0,85	0,09
PW	7	7,0	8,3	7,76	0,42	5,41	0,18
HH	7	5,0	5,7	5,47	0,28	5,14	0,08
FD	7	0,8	1,1	0,91	0,12	13,29	0,01
CW	7	2,6	2,9	2,80	0,11	4,12	0,01
DW	7	6,4	7,4	7,14	0,35	4,84	0,12
DT	7	6,4	7,4	6,94	0,30	4,39	0,09

*Falco columbarius – Tarsometatarsus*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	17	34,6	37,7	36,34	0,83	2,28	0,69
PW	17	6,3	7,0	6,76	0,17	2,57	0,03
HH	17	4,6	5,1	4,86	0,15	3,09	0,02
FD	17	0,8	1,2	0,96	0,12	12,26	0,01
CW	17	2,2	2,7	2,46	0,13	5,39	0,02
DW	17	6,0	6,7	6,28	0,18	2,94	0,03
DT	17	5,3	6,2	6,03	0,21	3,41	0,04

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	20	36,6	40,7	38,02	0,90	2,38	0,82
PW	20	6,9	7,9	7,40	0,24	3,22	0,06
HH	20	4,9	5,5	5,25	0,15	2,80	0,02
FD	20	0,7	1,2	0,96	0,13	13,26	0,02
CW	20	2,4	2,9	2,69	0,13	4,89	0,02
DW	20	6,5	7,4	6,94	0,21	3,04	0,04
DT	20	6,2	7,0	6,61	0,21	3,25	0,05

*Falco columbarius – Tarsometatarsus*

Table 19

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	36,5	36,7	36,60	–	–	–
PW	2	7,0	7,2	7,10	–	–	–
HH	2	4,9	5,1	5,00	–	–	–
FD	2	0,8	1,1	0,95	–	–	–
CW	2	2,4	2,5	2,45	–	–	–
DW	2	6,1	6,9	6,50	–	–	–
DT	2	6,0	6,5	6,25	–	–	–

*Falco tinnunculus- Tarsometatarsus*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	13	37,5	43,7	40,16	1,58	3,93	2,50
PW	13	6,6	7,6	7,18	0,29	4,03	0,08
HH	13	4,7	5,6	5,13	0,25	4,86	0,06
FD	13	0,8	1,3	1,01	0,14	13,84	0,02
CW	14	2,6	3,2	2,95	0,16	5,28	0,02
DW	14	6,4	7,3	6,85	0,31	4,46	0,09
DT	14	5,9	6,7	6,41	0,23	3,66	0,05

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	23	38,4	42,7	40,53	1,25	3,09	1,57
PW	25	6,8	8,0	7,48	0,30	4,05	0,09
HH	25	4,9	5,8	5,25	0,23	4,33	0,05
FD	25	0,6	1,2	1,00	0,13	13,23	0,02
CW	24	2,8	3,4	3,09	0,17	5,68	0,03
DW	23	6,4	8,0	7,15	0,36	5,11	0,13
DT	23	6,2	7,4	6,75	0,32	4,79	0,10

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	13	37,9	42,1	40,09	1,16	2,90	1,35
PW	13	6,7	7,8	7,37	0,27	3,61	0,07
HH	13	4,8	5,4	5,12	0,18	3,49	0,03
FD	13	0,9	1,2	1,01	0,11	11,07	0,01
CW	13	2,7	3,2	3,06	0,18	5,74	0,03
DW	13	6,2	7,3	6,95	0,33	4,79	0,11
DT	13	6,1	7,0	6,58	0,25	3,88	0,06

*Falco verperinus – Tarsometatarsus*

Table 19

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	10	27,4	30,7	29,10	0,87	3,00	0,76
PW	10	5,6	6,3	6,08	0,19	3,08	0,03
HH	10	4,3	4,7	4,50	0,11	2,57	0,01
FD	10	0,5	0,8	0,68	0,09	13,51	0,01
CW	10	2,2	2,7	2,38	0,15	6,20	0,02
DW	10	5,5	6,3	5,89	0,29	4,96	0,08
DT	10	5,2	5,9	5,55	0,23	4,10	0,05

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	13	27,2	30,9	29,30	1,05	3,58	1,10
PW	14	5,7	6,5	6,19	0,26	4,13	0,06
HH	14	4,3	5,0	4,61	0,19	4,03	0,03
FD	14	0,5	0,9	0,69	0,13	19,70	0,02
CW	14	2,3	2,7	2,47	0,13	5,36	0,02
DW	14	5,6	6,7	6,18	0,26	4,22	0,07
DT	14	5,2	6,3	5,72	0,26	4,56	0,07

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	28,7	30,7	29,91	0,70	2,33	0,49
PW	7	5,8	6,2	5,96	0,14	2,35	0,02
HH	7	4,3	4,7	4,53	0,16	3,54	0,03
FD	7	0,5	1,1	0,73	0,22	30,40	0,05
CW	7	2,2	2,5	2,36	0,11	4,81	0,01
DW	7	5,5	6,0	5,77	0,19	3,27	0,04
DT	7	5,4	5,7	5,51	0,12	2,20	0,01

*Falco naumanni – Tarsometatarsus*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	30,5	32,4	31,45	–	–	–
PW	2	6,3	6,4	6,35	–	–	–
HH	1	–	–	4,50	–	–	–
FD	1	–	–	0,60	–	–	–
CW	2	2,4	2,5	2,45	–	–	–
DW	2	5,6	5,7	5,65	–	–	–
DT	1	–	–	5,40	–	–	–

*Falco naumanni – Tarsometatarsus*

Table 19

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	30,40	–	–	–
PW	1	–	–	6,20	–	–	–
HH	1	–	–	4,50	–	–	–
FD	1	–	–	0,70	–	–	–
CW	1	–	–	2,60	–	–	–
DW	1	–	–	5,70	–	–	–
DT	1	–	–	5,50	–	–	–

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	30,00	–	–	–
PW	1	–	–	6,00	–	–	–
HH	1	–	–	4,80	–	–	–
FD	1	–	–	0,80	–	–	–
CW	1	–	–	2,20	–	–	–
DW	1	–	–	5,30	–	–	–
DT	1	–	–	5,10	–	–	–

*Falco subbuteo – Phalanx I digiti I posterior*

Table 20

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	10,0	10,7	10,24	0,22	2,17	0,05
PW	7	3,0	3,3	3,07	0,11	3,62	0,01
CW	7	1,7	1,8	1,77	0,05	2,75	0,00
DW	7	2,0	2,3	2,11	0,11	5,06	0,01

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	5	10,1	11,3	10,80	0,47	4,34	0,22
PW	5	3,1	3,8	3,38	0,27	7,94	0,07
CW	5	1,8	2,0	1,90	0,10	5,26	0,01
DW	5	2,2	2,6	2,38	0,15	6,23	0,02

*Falco columbarius – Phalanx I digiti I posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	15	9,1	10,3	9,74	0,28	2,90	0,08
PW	15	2,6	3,3	2,86	0,18	6,17	0,03
CW	15	1,4	1,8	1,61	0,10	6,14	0,01
DW	15	1,8	2,2	2,01	0,10	4,92	0,01

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	20	9,7	11,7	10,64	0,38	3,57	0,14
PW	20	2,9	3,4	3,16	0,11	3,59	0,01
CW	20	1,6	2,0	1,81	0,09	5,14	0,01
DW	20	2,0	2,5	2,23	0,11	4,87	0,01

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	9,8	10,4	10,10	–	–	–
PW	2	2,8	3,2	3,00	–	–	–
CW	2	1,6	1,8	1,70	–	–	–
DW	2	2,1	2,1	2,10	–	–	–

*Falco tinnunculus – Phalanx I digiti I posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	12	10,0	11,2	10,51	0,37	3,55	0,14
PW	12	3,1	3,8	3,45	0,21	5,99	0,04
CW	12	2,0	2,2	2,07	0,07	3,63	0,01
DW	12	2,1	2,5	2,29	0,12	5,08	0,01

*Falco tinnunculus – Phalanx 1 digiti 1 posterior*

Table 20

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	22	9,8	11,4	10,77	0,47	4,35	0,22
PW	22	3,2	4,0	3,68	0,21	5,66	0,04
CW	22	2,0	2,4	2,18	0,11	4,90	0,01
DW	22	2,1	2,7	2,37	0,14	6,03	0,02

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	13	10,0	11,5	10,62	0,45	4,25	0,20
PW	13	3,2	4,0	3,61	0,21	5,82	0,04
CW	13	1,9	2,3	2,17	0,12	5,45	0,01
DW	13	2,1	2,6	2,32	0,12	5,32	0,01

*Falco vespertinus – Phalanx 1 digiti 1 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	7,7	8,6	8,21	0,29	3,54	0,08
PW	7	2,6	2,9	2,74	0,10	3,56	0,01
CW	7	1,6	1,7	1,66	0,05	3,23	0,00
DW	7	1,8	2,0	1,93	0,09	4,93	0,01

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	10	7,7	8,9	8,37	0,36	4,25	0,13
PW	10	2,6	3,0	2,85	0,12	4,13	0,01
CW	10	1,6	1,9	1,70	0,12	7,34	0,02
DW	10	1,8	2,1	1,95	0,11	5,54	0,01

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	6	8,1	8,7	8,42	0,20	2,42	0,04
PW	6	2,7	3,1	2,85	0,16	5,77	0,03
CW	7	1,5	1,7	1,63	0,08	4,64	0,01
DW	7	1,8	2,0	1,89	0,09	4,77	0,01

*Falco naumanni – Phalanx 1 digiti 1 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	8,40	–	–	–
PW	1	–	–	2,90	–	–	–
CW	1	–	–	1,60	–	–	–
DW	1	–	–	2,00	–	–	–



*Falco naumanni – Phalanx 1 digiti 1 posterior*

Table 20

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	-	-	8,40	-	-	-
PW	1	-	-	2,90	-	-	-
CW	1	-	-	1,80	-	-	-
DW	1	-	-	2,30	-	-	-

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	-	-	7,60	-	-	-
PW	1	-	-	2,70	-	-	-
CW	1	-	-	1,50	-	-	-
DW	1	-	-	1,70	-	-	-

*Falco subbuteo – Phalanx 2 digiti 1 posterior*

Table 21

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	6	8,4	9,5	9,00	0,36	3,97	0,13
PW	6	2,0	2,2	2,08	0,07	3,61	0,01
PH	6	4,2	4,9	4,58	0,26	5,59	0,07

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	5	9,2	10,7	10,02	0,55	5,53	0,31
PW	5	1,9	2,3	2,20	0,17	7,87	0,03
PH	5	4,8	5,3	5,08	0,19	3,79	0,04

*Falco columbarius – Phalanx 2 digiti 1 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	14	9,0	10,2	9,39	0,33	3,48	0,11
PW	15	1,7	2,1	1,91	0,13	6,80	0,02
PH	15	4,1	4,6	4,37	0,16	3,71	0,03

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	20	9,8	11,0	10,27	0,30	2,90	0,09
PW	20	2,0	2,4	2,17	0,11	4,98	0,01
PH	20	4,6	5,3	4,95	0,16	3,30	0,03

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	9,3	10,0	9,65	–	–	–
PW	2	1,9	2,0	1,95	–	–	–
PH	2	4,5	5,0	4,75	–	–	–

*Falco tinnunculus – Phalanx 2 digiti 1 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	12	9,7	11,0	10,57	0,34	3,26	0,12
PW	12	2,2	2,7	2,47	0,14	5,82	0,02
PH	12	4,7	5,5	5,04	0,21	4,10	0,04

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	20	9,9	12,2	10,81	0,67	6,23	0,45
PW	20	2,3	2,8	2,55	0,16	6,41	0,03
PH	20	4,8	5,8	5,26	0,28	5,24	0,08

*Falco tinnunculus – Phalanx 2 digiti 1 posterior*

Table 21

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	12	9,6	11,2	10,51	0,51	4,89	0,26
PW	13	2,0	2,8	2,55	0,23	8,99	0,05
PH	13	4,8	5,4	5,11	0,19	3,64	0,03

*Falco vespertinus – Phalanx 2 digiti 1 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	6	7,3	8,1	7,82	0,28	3,56	0,08
PW	6	1,7	2,0	1,90	0,11	5,77	0,01
PH	6	3,9	4,3	4,05	0,14	3,40	0,02

♀	n	min.	max.	$\bar{x}$	S	S%	S
GL	11	7,3	8,7	7,85	0,36	4,64	0,13
PW	11	1,7	2,0	1,93	0,09	4,69	0,01
PH	11	3,9	4,2	4,04	0,08	2,03	0,01

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	7,2	7,9	7,61	0,24	3,16	0,06
PW	7	1,6	2,0	1,83	0,14	7,55	0,02
PH	7	3,9	4,1	4,01	0,07	1,72	0,00

*Falco naumanni – Phalanx 2 digiti 1 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	7,90	–	–	–
PW	1	–	–	1,90	–	–	–
PH	1	–	–	4,00	–	–	–

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	8,10	–	–	–
PW	1	–	–	1,80	–	–	–
PH	1	–	–	4,10	–	–	–

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	–	–	–	–
PW	1	–	–	1,80	–	–	–
PH	1	–	–	3,90	–	–	–

*Falco subbuteo – Phalanx 1 digiti 2 posterior*

Table 22

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	6	6,9	7,6	7,23	0,24	3,35	0,06
PW	6	2,9	3,3	3,07	0,15	4,91	0,02
CW	6	1,5	1,7	1,58	0,07	4,75	0,01
DW	6	2,2	2,5	2,28	0,13	5,28	0,02

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	5	7,5	9,4	8,14	0,81	9,93	0,65
PW	5	3,1	3,4	3,24	0,11	3,52	0,01
CW	5	1,5	1,9	1,72	0,15	8,62	0,02
DW	5	2,3	2,7	2,52	0,16	6,52	0,03

*Falco columbarius – Phalanx 1 digiti 2 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	15	6,4	7,0	6,75	0,20	3,01	0,04
PW	15	2,7	3,0	2,85	0,10	3,47	0,01
CW	15	1,6	1,7	1,65	0,05	3,14	0,00
DW	15	2,2	2,5	2,34	0,09	3,89	0,01

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	20	6,8	7,9	7,27	0,31	4,20	0,09
PW	20	2,9	3,4	3,13	0,13	4,04	0,02
CW	20	1,6	2,0	1,85	0,10	5,38	0,01
DW	20	2,3	2,7	2,56	0,11	4,43	0,01

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	6,7	7,4	7,05	–	–	–
PW	2	2,9	3,2	3,05	–	–	–
CW	2	1,8	1,8	1,80	–	–	–
DW	2	2,3	2,6	2,45	–	–	–

*Falco tinnunculus – Phalanx 1 digiti 2 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	12	5,9	6,8	6,38	0,29	4,52	0,08
PW	12	3,0	3,7	3,24	0,19	5,95	0,04
CW	12	1,8	2,2	1,99	0,10	5,00	0,01
DW	12	2,5	3,0	2,66	0,14	5,19	0,02

*Falco tinnunculus – Phalanx 1 digiti 2 posterior*

Table 22

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	20	6,0	7,3	6,62	0,38	5,81	0,15
PW	20	3,1	3,7	3,46	0,18	5,24	0,03
CW	20	1,9	2,4	2,13	0,13	5,92	0,02
DW	20	2,5	3,0	2,77	0,13	4,80	0,02

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	14	5,7	7,1	6,56	0,42	6,46	0,18
PW	14	3,1	3,7	3,40	0,17	5,03	0,03
CW	14	1,9	2,3	2,11	0,12	5,52	0,01
DW	14	2,5	2,9	2,69	0,12	4,48	0,01

*Falco vespertinus – Phalanx 1 digiti 2 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	9	5,4	6,4	5,82	0,35	6,06	0,12
PW	9	2,4	2,8	2,64	0,13	5,04	0,02
CW	9	1,4	1,6	1,48	0,08	5,64	0,01
DW	9	1,9	2,2	2,08	0,11	5,26	0,01

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	9	5,6	6,8	6,04	0,42	6,88	0,17
PW	9	2,4	3,0	2,73	0,17	6,34	0,03
CW	10	1,3	1,6	1,49	0,11	7,39	0,01
DW	10	2,0	2,3	2,13	0,09	4,45	0,01

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	6	5,4	6,1	5,78	0,29	5,06	0,09
PW	6	2,6	2,7	2,62	0,04	1,56	0,00
CW	6	1,3	1,5	1,42	0,07	5,31	0,01
DW	6	1,9	2,1	1,98	0,07	3,79	0,01

*Falco naumanni – Phalanx 1 digiti 2 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	5,70	–	–	–
PW	1	–	–	2,90	–	–	–
CW	1	–	–	1,50	–	–	–
DW	1	–	–	2,20	–	–	–

*Falco naumanni – Phalanx 1 digiti 2 posterior*

Table 22

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	6,10	–	–	–
PW	1	–	–	2,60	–	–	–
CW	1	–	–	1,70	–	–	–
DW	1	–	–	2,20	–	–	–

*Falco subbuteo – Phalanx 2 digiti 2 posterior*

Table 23

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	10,2	10,8	10,50	0,20	1,90	0,04
PW	7	2,3	2,5	2,43	0,09	3,92	0,01
CW	7	1,6	1,7	1,61	0,04	2,34	0,00
DW	7	1,7	2,0	1,90	0,10	5,26	0,01

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	5	10,5	11,7	11,20	0,46	4,14	0,21
PW	5	2,4	2,8	2,64	0,15	5,74	0,02
CW	5	1,5	1,9	1,68	0,15	8,83	0,02
DW	5	1,9	2,3	2,10	0,19	8,91	0,03

*Falco columbarius – Phalanx 2 digiti 2 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	15	9,3	10,1	9,77	0,25	2,56	0,06
PW	15	2,2	2,5	2,39	0,09	3,84	0,01
CW	15	1,5	1,7	1,60	0,06	4,09	0,00
DW	15	1,7	2,0	1,85	0,08	4,51	0,01

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	20	9,8	11,8	10,67	0,38	3,57	0,14
PW	20	2,5	2,8	2,64	0,08	3,11	0,01
CW	20	1,6	1,9	1,78	0,08	4,31	0,01
DW	20	1,8	2,2	2,02	0,09	4,50	0,01

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	10,0	10,6	10,30	–	–	–
PW	2	2,5	2,7	2,60	–	–	–
CW	2	1,6	1,7	1,65	–	–	–
DW	2	1,9	2,0	1,95	–	–	–

*Falco tinnunculus – Phalanx 2 digiti 2 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	13	10,2	11,5	10,80	0,36	3,34	0,13
PW	13	2,6	3,1	2,74	0,15	5,48	0,02
CW	13	1,9	2,1	1,98	0,05	2,79	0,00
DW	13	2,0	2,3	2,15	0,12	5,58	0,01

*Falco tinnunculus – Phalanx 2 digiti 2 posterior*

Table 23

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	21	10,3	11,8	11,09	0,45	4,03	0,20
PW	21	2,6	3,0	2,86	0,12	4,06	0,01
CW	21	1,9	2,3	2,07	0,10	4,86	0,01
DW	21	2,0	2,5	2,23	0,13	5,70	0,02

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	14	10,3	11,6	10,93	0,38	3,47	0,14
PW	14	2,6	3,1	2,84	0,13	4,71	0,02
CW	14	1,8	2,2	2,06	0,10	4,94	0,01
DW	14	2,0	2,3	2,17	0,11	5,24	0,01

*Falco vespertinus – Phalanx 2 digiti 2 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	8	8,1	8,8	8,50	0,28	3,33	0,08
PW	8	2,0	2,3	2,16	0,09	4,24	0,01
CW	8	1,4	1,7	1,52	0,13	8,40	0,02
DW	8	1,5	1,8	1,70	0,11	6,29	0,01

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	10	8,1	9,1	8,67	0,32	3,69	0,10
PW	10	2,1	2,5	2,26	0,13	5,60	0,02
CW	10	1,4	1,7	1,51	0,10	6,59	0,01
DW	10	1,6	1,9	1,70	0,11	6,79	0,01

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	6	8,4	8,7	8,58	0,12	1,36	0,01
PW	6	2,0	2,2	2,13	0,08	3,83	0,01
CW	6	1,3	1,5	1,42	0,10	6,94	0,01
DW	6	1,4	1,7	1,60	0,11	6,85	0,01

*Falco naumanni – Phalanx 2 digiti 2 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	8,60	–	–	–
PW	1	–	–	2,30	–	–	–
CW	1	–	–	1,40	–	–	–
DW	1	–	–	1,80	–	–	–



*Falco naumanni – Phalanx 2 digiti 2 posterior*

Table 23

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	8,60	–	–	–
PW	1	–	–	2,30	–	–	–
CW	1	–	–	1,60	–	–	–
DW	1	–	–	1,90	–	–	–

*Falco subbuteo – Phalanx 3 digiti 2 posterior*

Table 24

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	6	8,3	9,3	9,02	0,36	3,99	0,13
PW	6	1,9	2,1	2,00	0,06	3,16	0,00
PH	6	4,2	4,5	4,37	0,12	2,77	0,01

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	5	9,0	10,6	9,98	0,60	6,03	0,36
PW	5	1,9	2,3	2,12	0,18	8,44	0,03
PH	5	4,4	5,0	4,78	0,27	5,61	0,07

*Falco columbarius – Phalanx 3 digiti 2 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	14	9,0	9,5	9,26	0,17	1,83	0,03
PW	15	1,7	2,2	1,97	0,14	7,03	0,02
PH	15	3,8	4,3	4,13	0,16	3,94	0,03

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	20	9,5	10,8	10,09	0,31	3,07	0,10
PW	20	2,0	2,3	2,18	0,09	4,36	0,01
PH	20	4,3	4,8	4,59	0,14	3,12	0,02

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	9,3	9,9	9,60	–	–	–
PW	2	1,9	2,1	2,00	–	–	–
PH	2	4,2	4,6	4,40	–	–	–

*Falco tinnunculus – Phalanx 3 digiti 2 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	12	9,5	10,6	10,11	0,31	3,08	0,10
PW	12	2,1	2,7	2,39	0,16	6,78	0,03
PH	12	4,2	4,9	4,52	0,20	4,33	0,04

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	18	9,5	11,8	10,37	0,60	5,76	0,36
PW	18	2,2	2,7	2,48	0,14	5,63	0,02
PH	18	4,4	5,4	4,82	0,23	4,74	0,05

*Falco tinnunculus – Phalanx 3 digiti 2 posterior*

Table 24

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	14	9,2	11,0	10,11	0,47	4,62	0,22
PW	14	1,9	2,8	2,47	0,24	9,58	0,06
PH	14	4,3	4,9	4,66	0,21	4,59	0,05

*Falco vespertinus – Phalanx 3 digiti 2 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	7,2	8,2	7,87	0,33	4,19	0,11
PW	7	1,5	1,9	1,80	0,15	8,49	0,02
PH	7	3,5	3,9	3,73	0,14	3,70	0,02

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	7,5	8,0	7,83	0,16	2,05	0,03
PW	7	1,7	2,0	1,86	0,10	5,25	0,01
PH	7	3,6	3,9	3,74	0,11	3,03	0,01

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	6	7,7	8,0	7,82	0,15	1,88	0,02
PW	6	1,6	1,9	1,75	0,12	7,00	0,01
PH	6	3,6	3,8	3,73	0,08	2,19	0,01

*Falco naumanni – Phalanx 3 digiti 2 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	7,60	–	–	–
PW	1	–	–	1,90	–	–	–
PH	1	–	–	3,60	–	–	–

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	8,00	–	–	–
PW	1	–	–	1,80	–	–	–
PH	1	–	–	3,60	–	–	–

*Falco subbuteo – Phalanx 1 digiti 3 posterior*

Table 25

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	11,9	12,6	12,17	0,21	1,76	0,05
PW	7	3,0	3,5	3,17	0,18	5,67	0,03
CW	7	1,5	1,6	1,51	0,04	2,50	0,00
DW	7	2,0	2,3	2,19	0,12	5,56	0,01

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	5	12,3	13,0	12,72	0,31	2,45	0,10
PW	5	3,1	3,6	3,48	0,22	6,23	0,05
CW	5	1,5	1,7	1,58	0,08	5,29	0,01
DW	5	2,1	2,5	2,36	0,19	8,26	0,04

*Falco columbarius – Phalanx 1 digiti 3 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	15	10,8	11,8	11,21	0,27	2,42	0,07
PW	15	3,0	3,3	3,15	0,09	2,91	0,01
CW	15	1,4	1,7	1,53	0,07	4,72	0,00
DW	15	2,0	2,3	2,19	0,11	4,85	0,01

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	19	11,4	13,0	12,00	0,38	3,14	0,14
PW	20	3,2	3,6	3,46	0,11	3,17	0,01
CW	20	1,4	1,8	1,65	0,10	6,03	0,01
DW	20	2,1	2,6	2,41	0,13	5,52	0,02

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	11,3	11,8	11,55	–	–	–
PW	2	3,1	3,3	3,20	–	–	–
CW	2	1,5	1,6	1,55	–	–	–
DW	2	2,1	2,3	2,20	–	–	–

*Falco tinnunculus – Phalanx 1 digiti 3 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	14	9,4	11,0	10,25	0,43	4,20	0,19
PW	14	3,1	3,7	3,36	0,17	5,16	0,03
CW	14	1,5	1,7	1,64	0,06	3,93	0,00
DW	14	2,0	2,5	2,15	0,12	5,40	0,01

*Falco tinnunculus – Phalanx 1 digiti 3 posterior*

Table 25

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	20	9,8	11,2	10,50	0,44	4,16	0,19
PW	20	3,1	3,7	3,52	0,15	4,38	0,02
CW	20	1,6	1,8	1,71	0,07	4,20	0,00
DW	20	2,0	2,5	2,30	0,13	5,54	0,02

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	13	9,4	11,1	10,55	0,49	4,61	0,24
PW	13	3,2	3,7	3,46	0,20	5,72	0,04
CW	13	1,4	1,8	1,69	0,10	6,13	0,01
DW	13	2,0	2,4	2,24	0,14	6,46	0,02

*Falco vespertinus – Phalanx 1 digiti 3 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	8	8,6	9,6	8,94	0,35	3,96	0,13
PW	8	2,7	3,0	2,87	0,12	4,05	0,01
CW	8	1,3	1,4	1,35	0,05	3,96	0,00
DW	8	1,8	2,1	1,97	0,10	5,24	0,01

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	10	8,7	10,2	9,31	0,49	5,25	0,24
PW	10	2,9	3,2	3,01	0,09	2,91	0,01
CW	10	1,2	1,6	1,42	0,11	7,99	0,01
DW	10	1,9	2,3	2,02	0,11	5,62	0,01

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	8,2	9,6	9,06	0,46	5,05	0,21
PW	7	2,7	2,9	2,84	0,08	2,77	0,01
CW	7	1,2	1,4	1,30	0,10	7,69	0,01
DW	7	1,8	2,0	1,91	0,11	5,58	0,01

*Falco naumanni – Phalanx 1 digiti 3 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	9,40	–	–	–
PW	1	–	–	3,40	–	–	–
CW	1	–	–	1,30	–	–	–
DW	1	–	–	2,10	–	–	–

*Falco naumanni* – Phalanx 1 digiti 3 posterior

Table 25

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	8,80	–	–	–
PW	1	–	–	2,90	–	–	–
CW	1	–	–	1,40	–	–	–
DW	1	–	–	2,10	–	–	–

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	8,10	–	–	–
PW	1	–	–	2,90	–	–	–
CW	1	–	–	1,30	–	–	–
DW	1	–	–	1,80	–	–	–

*Falco subbuteo – Phalanx 2 digiti 3 posterior*

Table 26

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	9,3	10,0	9,63	0,27	2,86	0,08
PW	7	2,3	2,5	2,41	0,09	3,73	0,01
CW	7	1,3	1,4	1,37	0,05	3,56	0,00
DW	7	1,8	2,1	1,94	0,10	5,02	0,01

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	5	9,9	10,4	10,18	0,22	2,13	0,05
PW	5	2,4	2,8	2,64	0,17	6,34	0,03
CW	5	1,4	1,5	1,46	0,05	3,75	0,00
DW	5	1,8	2,3	2,04	0,19	9,56	0,04

*Falco columbarius – Phalanx 2 digiti 3 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	13	8,3	9,0	8,68	0,20	2,36	0,04
PW	13	2,1	2,5	2,33	0,10	4,43	0,01
CW	13	1,3	1,5	1,43	0,07	5,25	0,01
DW	13	1,6	2,0	1,83	0,12	6,83	0,02

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	19	8,6	9,7	9,07	0,34	3,80	0,12
PW	19	2,3	2,7	2,61	0,10	4,02	0,01
CW	19	1,3	1,7	1,58	0,09	5,81	0,01
DW	19	1,8	2,2	2,04	0,09	4,41	0,01

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	8,5	9,5	9,00	–	–	–
PW	2	2,4	2,4	2,40	–	–	–
CW	2	1,4	1,5	1,45	–	–	–
DW	2	1,8	2,0	1,90	–	–	–

*Falco tinnunculus – Phalanx 2 digiti 3 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	11	6,0	7,3	6,64	0,43	6,47	0,18
PW	11	2,3	2,9	2,51	0,15	6,03	0,02
CW	11	1,4	1,7	1,58	0,09	5,52	0,01
DW	11	1,9	2,4	2,05	0,13	6,29	0,02

*Falco tinnunculus – Phalanx 2 digiti 3 posterior*

Table 26

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	19	6,5	7,6	6,97	0,38	5,43	0,14
PW	19	2,4	2,8	2,62	0,12	4,51	0,01
CW	19	1,5	1,8	1,63	0,07	4,59	0,01
DW	19	2,0	2,3	2,13	0,13	6,04	0,02

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	13	5,7	7,5	6,93	0,46	6,65	0,21
PW	13	2,4	2,8	2,57	0,11	4,32	0,01
CW	13	1,3	1,8	1,61	0,12	7,39	0,01
DW	13	1,9	2,2	2,06	0,10	4,66	0,01

*Falco vespertinus – Phalanx 2 digiti 3 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	5,5	6,6	5,99	0,41	6,92	0,17
PW	7	2,1	2,3	2,17	0,08	3,48	0,01
CW	7	1,2	1,4	1,33	0,08	5,69	0,01
DW	7	1,6	1,9	1,77	0,09	5,37	0,01

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	10	5,7	7,4	6,31	0,47	7,52	0,22
PW	10	2,2	2,5	2,27	0,09	4,18	0,01
CW	10	1,2	1,6	1,39	0,11	7,92	0,01
DW	10	1,7	1,9	1,79	0,06	3,17	0,00

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	5,6	6,8	6,29	0,40	6,33	0,16
PW	7	2,0	2,3	2,14	0,10	4,55	0,01
CW	7	1,2	1,4	1,30	0,08	6,28	0,01
DW	7	1,6	1,7	1,66	0,05	3,23	0,00

*Falco naumanni – Phalanx 2 digiti 3 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	5,30	–	–	–
PW	1	–	–	2,20	–	–	–
CW	1	–	–	1,30	–	–	–
DW	1	–	–	1,80	–	–	–



*Falco naumanni – Phalanx 2 digiti 3 posterior*

Table 26

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	5,50	–	–	–
PW	1	–	–	2,10	–	–	–
CW	1	–	–	1,40	–	–	–
DW	1	–	–	1,70	–	–	–

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	5,10	–	–	–
PW	1	–	–	2,00	–	–	–
CW	1	–	–	1,30	–	–	–
DW	1	–	–	1,60	–	–	–

*Falco subbuteo – Phalanx 3 digiti 3 posterior*

Table 27

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	9,2	9,8	9,43	0,21	2,27	0,05
PW	7	2,0	2,2	2,10	0,10	4,76	0,01
CW	7	1,5	1,6	1,54	0,05	3,46	0,00
DW	7	1,7	1,8	1,76	0,05	3,04	0,00

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	5	9,4	10,5	10,12	0,45	4,50	0,21
PW	5	2,1	2,5	2,32	0,16	7,08	0,03
CW	5	1,5	1,8	1,64	0,11	6,95	0,01
DW	5	1,8	2,1	1,94	0,13	6,92	0,02

*Falco columbarius – Phalanx 3 digiti 3 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	13	8,6	9,5	9,15	0,24	2,59	0,06
PW	13	1,7	2,0	1,95	0,10	4,97	0,01
CW	13	1,4	1,6	1,51	0,06	4,25	0,00
DW	13	1,5	1,8	1,70	0,09	5,37	0,01

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	19	9,1	10,9	9,97	0,34	3,39	0,11
PW	19	2,0	2,4	2,24	0,10	4,52	0,01
CW	20	1,4	1,9	1,71	0,10	5,97	0,01
DW	20	1,7	2,1	1,93	0,09	4,52	0,01

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	9,3	9,9	9,60	–	–	–
PW	2	2,0	2,2	2,10	–	–	–
CW	2	1,6	1,7	1,65	–	–	–
DW	2	1,7	1,9	1,80	–	–	–

*Falco tinnunculus – Phalanx 3 digiti 3 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	13	9,1	10,0	9,39	0,30	3,21	0,09
PW	13	2,0	2,5	2,18	0,13	5,86	0,02
CW	13	1,7	2,0	1,80	0,08	4,54	0,01
DW	13	1,8	2,2	1,96	0,10	5,32	0,01

*Falco tinnunculus – Phalanx 3 digiti 3 posterior*

Table 27

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	18	8,9	10,5	9,65	0,40	4,15	0,16
PW	18	2,1	2,5	2,28	0,12	5,26	0,01
CW	18	1,7	2,1	1,87	0,11	5,81	0,01
DW	18	1,9	2,3	2,04	0,11	5,36	0,01

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	14	8,9	10,1	9,52	0,38	4,00	0,14
PW	14	2,1	2,5	2,28	0,12	5,49	0,02
CW	14	1,6	2,0	1,85	0,11	5,90	0,01
DW	14	1,8	2,1	1,98	0,09	4,51	0,01

*Falco vespertinus – Phalanx 3 digiti 3 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	7,3	7,9	7,60	0,23	3,04	0,05
PW	7	1,8	2,0	1,89	0,07	3,66	0,00
CW	7	1,3	1,5	1,39	0,07	4,98	0,00
DW	7	1,4	1,7	1,56	0,11	7,28	0,01

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	10	7,1	8,3	7,65	0,37	4,78	0,13
PW	10	1,8	2,1	1,97	0,09	4,82	0,01
CW	10	1,3	1,6	1,45	0,08	5,86	0,01
DW	10	1,5	1,7	1,61	0,07	4,58	0,00

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	7,5	7,8	7,61	0,12	1,60	0,01
PW	7	1,7	2,0	1,86	0,10	5,25	0,01
CW	7	1,3	1,4	1,36	0,05	3,94	0,00
DW	7	1,4	1,7	1,53	0,11	7,28	0,01

*Falco naumanni – Phalanx 3 digiti 3 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	7,40	–	–	–
PW	1	–	–	1,80	–	–	–
CW	1	–	–	1,30	–	–	–
DW	1	–	–	1,70	–	–	–

*Falco naumanni – Phalanx 3 digiti 3 posterior*

Table 27

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	7,40	–	–	–
PW	1	–	–	1,80	–	–	–
CW	1	–	–	1,40	–	–	–
DW	1	–	–	1,70	–	–	–

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	6,80	–	–	–
PW	1	–	–	1,60	–	–	–
CW	1	–	–	1,20	–	–	–
DW	1	–	–	1,50	–	–	–

*Falco subbuteo – Phalanx 4 digiti 3 posterior*

Table 28

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	6	8,0	9,0	8,63	0,37	4,31	0,14
PW	6	2,0	2,2	2,05	0,08	4,08	0,01
PH	6	3,7	4,1	3,95	0,14	3,49	0,02

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	5	8,3	10,1	9,26	0,67	7,19	0,44
PW	5	2,0	2,3	2,24	0,13	5,99	0,02
PH	5	4,0	4,4	4,28	0,18	4,18	0,03

*Falco columbarius – Phalanx 4 digiti 3 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	14	8,0	9,2	8,66	0,32	3,73	0,10
PW	14	1,7	2,2	2,01	0,14	7,17	0,02
PH	14	3,5	4,0	3,83	0,17	4,52	0,03

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	20	8,8	9,8	9,35	0,28	2,97	0,08
PW	20	2,0	2,4	2,27	0,13	5,55	0,02
PH	20	4,0	4,5	4,26	0,14	3,27	0,02

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	9,0	9,3	9,15	–	–	–
PW	2	2,0	2,2	2,10	–	–	–
PH	2	4,0	4,2	4,10	–	–	–

*Falco tinnunculus – Phalanx 4 digiti 3 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	13	8,5	9,3	9,04	0,23	2,50	0,05
PW	13	2,1	2,7	2,33	0,18	7,71	0,03
PH	13	3,7	4,3	3,98	0,16	4,00	0,02

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	20	8,5	10,5	9,30	0,49	5,30	0,24
PW	20	2,1	2,7	2,41	0,17	6,89	0,03
PH	20	3,8	5,0	4,19	0,23	5,44	0,05

*Falco tinnunculus – Phalanx 4 digiti 3 posterior*

Table 28

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	12	8,0	9,6	8,95	0,48	5,32	0,23
PW	12	2,0	2,6	2,40	0,19	7,95	0,04
PH	12	3,8	4,3	4,07	0,18	4,36	0,03

*Falco vespertinus – Phalanx 4 digiti 3 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	7,2	8,3	7,69	0,38	4,89	0,14
PW	7	1,7	2,0	1,94	0,11	5,84	0,01
PH	7	3,3	3,6	3,46	0,10	2,82	0,01

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	8	7,3	7,8	7,61	0,17	2,27	0,03
PW	8	1,7	2,1	1,89	0,12	6,60	0,02
PH	8	3,3	3,5	3,39	0,08	2,46	0,01

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	7,1	8,0	7,53	0,31	4,11	0,10
PW	7	1,7	2,0	1,84	0,11	6,15	0,01
PH	7	3,3	3,5	3,40	0,08	2,40	0,01

*Falco naumanni – Phalanx 4 digiti 3 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	7,50	–	–	–
PW	1	–	–	2,00	–	–	–
PH	1	–	–	3,20	–	–	–

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	7,60	–	–	–
PW	1	–	–	2,00	–	–	–
PH	1	–	–	3,30	–	–	–

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	6,60	–	–	–
PW	1	–	–	1,70	–	–	–
PH	1	–	–	3,10	–	–	–

*Falco subbuteo* – Phalanx 1 digiti 4 posterior

Table 29

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	4,3	5,0	4,60	0,24	5,32	0,06
CW	7	1,7	2,2	1,96	0,17	8,78	0,03

017♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	4	4,3	5,1	4,75	0,33	6,98	0,11
CW	4	1,9	2,2	2,05	0,13	6,30	0,02

*Falco columbarius* – Phalanx 1 digiti 4 posterior

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	15	3,7	4,3	4,03	0,13	3,31	0,02
CW	15	1,7	2,0	1,83	0,09	4,84	0,01

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	20	4,0	5,0	4,41	0,23	5,20	0,05
CW	20	1,8	2,1	1,97	0,07	3,63	0,00

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	3,8	4,6	4,20	–	–	–
CW	2	1,8	1,9	1,85	–	–	–

*Falco tinnunculus* – Phalanx 1 digiti 4 posterior

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	9	3,7	4,1	3,84	0,15	3,93	0,02
CW	9	1,9	2,3	2,08	0,12	5,78	0,01

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	17	3,4	4,5	4,05	0,26	6,37	0,07
CW	17	1,9	2,4	2,13	0,12	5,48	0,01

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	12	3,6	4,4	3,92	0,21	5,44	0,05
CW	12	1,8	2,3	2,12	0,15	7,27	0,02

*Falco vespertinus – Phalanx 1 digiti 4 posterior*

Table 29

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	3,4	3,8	3,59	0,16	4,39	0,02
CW	7	1,4	1,8	1,69	0,15	8,68	0,02

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	9	3,4	4,0	3,60	0,19	5,20	0,03
CW	9	1,5	1,9	1,72	0,13	7,56	0,02

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	3,3	3,7	3,54	0,14	3,94	0,02
CW	7	1,6	1,8	1,69	0,07	4,09	0,00

*Falco naumanni – Phalanx 1 digiti 4 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	3,5	–	–	–
CW	1	–	–	1,8	–	–	–

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	3,4	–	–	–
CW	1	–	–	1,9	–	–	–

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	3,3	–	–	–
CW	1	–	–	1,7	–	–	–



*Falco subbuteo – Phalanx 2 digiti 4 posterior*

Table 30

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	4,0	4,8	4,34	0,29	6,76	0,09
PW	7	2,5	3,0	2,73	0,18	6,59	0,03
CW	7	1,7	2,0	1,84	0,10	5,30	0,01
DW	7	2,0	2,3	2,16	0,14	6,48	0,02

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	5	4,1	4,9	4,48	0,29	6,58	0,09
PW	5	2,7	3,1	2,86	0,17	5,85	0,03
CW	5	1,8	2,2	2,00	0,19	9,35	0,03
DW	5	2,0	2,4	2,20	0,16	7,19	0,02

*Falco columbarius – Phalanx 2 digiti 4 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	15	3,5	4,0	3,69	0,15	4,21	0,02
PW	15	2,2	2,6	2,38	0,11	4,82	0,01
CW	15	1,6	1,9	1,79	0,10	5,76	0,01
DW	15	1,9	2,2	2,03	0,09	4,36	0,01

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	19	3,7	4,3	3,98	0,17	4,40	0,03
PW	19	2,4	2,8	2,60	0,12	4,80	0,02
CW	19	1,8	2,2	1,98	0,12	5,97	0,01
DW	19	2,0	2,5	2,26	0,11	4,93	0,01

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	3,3	4,0	3,65	–	–	–
PW	2	2,3	2,5	2,40	–	–	–
CW	2	1,8	1,9	1,85	–	–	–
DW	2	2,0	2,3	2,15	–	–	–

*Falco tinnunculus – Phalanx 2 digiti 4 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	11	2,9	3,2	3,03	0,11	3,65	0,01
PW	11	2,5	3,2	2,79	0,19	6,69	0,03
DW	11	2,2	2,6	2,27	0,12	5,24	0,01

*Falco tinnunculus – Phalanx 2 digiti 4 posterior*

Table 30

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	18	3,0	3,7	3,26	0,21	6,34	0,04
PW	18	2,6	3,2	2,89	0,13	4,58	0,02
DW	18	2,2	2,7	2,37	0,13	5,61	0,02

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	14	3,0	3,5	3,24	0,15	4,63	0,02
PW	14	2,6	3,1	2,84	0,15	5,29	0,02
DW	14	2,1	2,5	2,29	0,14	6,04	0,02

*Falco vespertinus – Phalanx 2 digiti 4 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	8	2,8	3,1	2,97	0,10	3,48	0,01
PW	8	2,2	2,4	2,32	0,07	3,04	0,00
DW	8	1,8	2,0	1,90	0,09	4,87	0,01

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	2,7	3,0	2,90	0,10	3,45	0,01
PW	7	2,3	2,5	2,39	0,09	3,77	0,01
DW	7	1,8	2,1	1,97	0,11	5,64	0,01

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	4	2,8	3,0	2,95	0,10	3,39	0,01
PW	4	2,2	2,4	2,30	0,08	3,55	0,01
DW	4	1,8	1,9	1,82	0,05	2,74	0,00

*Falco naumanni – Phalanx 2 digiti 4 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	2,40	–	–	–
PW	1	–	–	2,10	–	–	–

*Falco naumanni – Phalanx 2 digiti 4 posterior*

Table 30

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	2,50	–	–	–
PW	1	–	–	2,10	–	–	–

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	2,40	–	–	–
PW	1	–	–	2,20	–	–	–

*Falco subbuteo – Phalanx 3 digiti 4 posterior*

Table 31

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	5,7	6,9	6,03	0,44	7,28	0,19
PW	7	2,1	2,5	2,30	0,16	7,10	0,03
CW	7	1,3	1,5	1,40	0,06	4,12	0,00
DW	7	1,7	2,0	1,80	0,11	6,41	0,01

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	5	5,8	7,0	6,26	0,49	7,87	0,24
PW	5	2,3	2,7	2,52	0,16	6,52	0,03
CW	5	1,3	1,6	1,46	0,15	10,39	0,02
DW	5	1,8	2,1	1,94	0,13	6,92	0,02

*Falco columbarius – Phalanx 3 digiti 4 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	14	4,7	5,6	5,01	0,26	5,16	0,07
PW	14	2,0	2,5	2,25	0,14	6,22	0,02
CW	14	1,3	1,5	1,41	0,05	3,37	0,00
DW	14	1,6	2,0	1,84	0,12	6,62	0,01

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	20	4,9	5,7	5,36	0,22	4,12	0,05
PW	20	2,3	2,7	2,48	0,09	3,76	0,01
CW	20	1,3	1,8	1,55	0,10	6,45	0,01
DW	20	1,8	2,2	2,00	0,09	4,71	0,01

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	5,0	5,8	5,40	–	–	–
PW	2	2,2	2,5	2,35	–	–	–
CW	2	1,4	1,4	1,40	–	–	–
DW	2	1,7	2,0	1,85	–	–	–

*Falco tinnunculus – Phalanx 3 digiti 4 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	11	3,5	4,0	3,74	0,19	5,12	0,04
PW	11	2,4	3,0	2,57	0,17	6,52	0,03
CW	11	1,8	2,1	1,91	0,09	4,94	0,01
DW	11	2,0	2,5	2,10	0,14	6,73	0,02

*Falco tinnunculus – Phalanx 3 digiti 4 posterior*

Table 31

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	16	3,6	4,4	3,94	0,27	6,74	0,07
PW	16	2,5	2,9	2,66	0,12	4,52	0,01
CW	16	1,8	2,1	1,95	0,09	4,59	0,01
DW	16	2,0	2,4	2,17	0,12	5,51	0,01

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	13	3,5	4,2	3,89	0,24	6,07	0,06
PW	13	2,4	2,8	2,58	0,13	5,20	0,02
CW	13	1,6	2,1	1,91	0,13	6,69	0,02
DW	13	2,0	2,2	2,08	0,08	4,01	0,01

*Falco vespertinus – Phalanx 3 digiti 4 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	3,3	3,7	3,50	0,16	4,67	0,03
PW	7	2,0	2,2	2,11	0,07	3,26	0,00
CW	7	1,3	1,6	1,49	0,11	7,19	0,01
DW	7	1,6	1,8	1,69	0,07	4,09	0,00

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	8	3,4	3,7	3,60	0,11	2,97	0,01
PW	8	2,0	2,4	2,21	0,15	6,59	0,02
CW	8	1,3	1,7	1,51	0,12	8,24	0,02
DW	8	1,6	1,9	1,74	0,09	5,27	0,01

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	6	3,4	3,7	3,60	0,13	3,51	0,02
PW	6	2,0	2,3	2,13	0,12	5,68	0,01
CW	6	1,3	1,5	1,42	0,07	5,31	0,01
DW	6	1,5	1,8	1,68	0,12	6,94	0,01

*Falco naumanni – Phalanx 3 digiti 4 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	3,10	–	–	–
PW	1	–	–	2,20	–	–	–
CW	1	–	–	1,50	–	–	–
DW	1	–	–	1,70	–	–	–

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	3,40	–	–	–
PW	1	–	–	2,00	–	–	–
CW	1	–	–	1,50	–	–	–
DW	1	–	–	1,60	–	–	–

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	3,10	–	–	–
PW	1	–	–	2,00	–	–	–
CW	1	–	–	1,40	–	–	–
DW	1	–	–	1,50	–	–	–

*Falco subbuteo – Phalanx 4 digiti 4 posterior*

Table 32

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	8,6	9,2	8,87	0,22	2,50	0,05
PW	7	1,8	2,2	2,00	0,14	7,07	0,02
CW	7	1,3	1,5	1,40	0,06	4,12	0,00
DW	7	1,5	1,7	1,63	0,08	4,64	0,01

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	5	8,9	9,9	9,52	0,39	4,09	0,15
PW	5	1,9	2,3	2,12	0,15	7,00	0,02
CW	5	1,4	1,7	1,52	0,11	7,21	0,01
DW	5	1,6	1,9	1,78	0,13	7,32	0,02

*Falco columbarius – Phalanx 4 digiti 4 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	14	8,1	9,0	8,56	0,24	2,85	0,06
PW	13	1,6	2,0	1,83	0,11	6,06	0,01
CW	14	1,2	1,5	1,37	0,08	6,02	0,01
DW	14	1,4	1,7	1,59	0,08	5,26	0,01

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	20	8,5	10,4	9,37	0,34	3,66	0,12
PW	20	1,8	2,3	2,05	0,11	5,35	0,01
CW	20	1,3	1,6	1,53	0,07	4,85	0,01
DW	20	1,6	2,0	1,78	0,09	4,90	0,01

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	8,7	9,2	8,95	–	–	–
PW	2	1,9	2,0	1,95	–	–	–
CW	2	1,4	1,5	1,45	–	–	–
DW	2	1,6	1,8	1,70	–	–	–

*Falco tinnunculus – Phalanx 4 digiti 4 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	11	8,3	9,4	8,85	0,32	3,62	0,10
PW	11	2,0	2,6	2,22	0,16	7,22	0,03
CW	11	1,5	1,9	1,70	0,12	6,96	0,01
DW	11	1,6	2,0	1,83	0,13	6,96	0,02

*Falco tinnunculus – Phalanx 4 digiti 4 posterior*

Table 32

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	19	8,5	9,9	9,15	0,36	3,98	0,13
PW	19	2,2	2,5	2,34	0,11	4,78	0,01
CW	19	1,6	2,0	1,78	0,11	6,09	0,01
DW	19	1,7	2,1	1,88	0,10	5,40	0,01

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	13	8,0	9,6	8,88	0,42	4,68	0,17
PW	13	2,0	2,5	2,24	0,14	6,46	0,02
CW	13	1,4	1,9	1,71	0,13	7,84	0,02
DW	13	1,6	2,0	1,80	0,11	6,00	0,01

*Falco vespertinus – Phalanx 4 digiti 4 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	6,4	7,3	6,80	0,29	4,33	0,09
PW	7	1,7	1,8	1,76	0,05	3,04	0,00
CW	7	1,2	1,4	1,27	0,08	5,95	0,01
DW	7	1,3	1,6	1,49	0,11	7,19	0,01

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	9	6,5	7,6	7,00	0,34	4,84	0,11
PW	9	1,7	2,0	1,86	0,11	6,09	0,01
CW	9	1,2	1,5	1,32	0,10	7,35	0,01
DW	9	1,4	1,6	1,48	0,08	5,64	0,01

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	6,9	7,1	6,97	0,09	1,36	0,01
PW	7	1,6	2,0	1,79	0,13	7,53	0,02
CW	7	1,2	1,3	1,24	0,05	4,30	0,00
DW	7	1,4	1,5	1,44	0,05	3,70	0,00

*Falco naumanni – Phalanx 4 digiti 4 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	6,80	–	–	–
PW	1	–	–	1,80	–	–	–
CW	1	–	–	1,30	–	–	–
DW	1	–	–	1,50	–	–	–



*Falco naumanni – Phalanx 4 digiti 4 posterior*

Table 32

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	-	-	6,90	-	-	-
PW	1	-	-	1,70	-	-	-
CW	1	-	-	1,30	-	-	-
DW	1	-	-	1,50	-	-	-

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	-	-	6,20	-	-	-
PW	1	-	-	1,70	-	-	-
CW	1	-	-	1,20	-	-	-
DW	1	-	-	1,40	-	-	-

*Falco subbuteo – Phalanx 5 digiti 4 posterior*

Table 33

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	5	7,6	8,2	7,86	0,22	2,79	0,05
PW	6	1,7	1,9	1,78	0,07	4,22	0,01
PH	6	3,6	4,0	3,82	0,13	3,48	0,02

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	4	7,9	9,1	8,57	0,50	5,82	0,25
PW	4	1,6	2,0	1,82	0,17	9,36	0,03
PH	4	4,0	4,5	4,27	0,21	4,82	0,04

*Falco columbarius – Phalanx 5 digiti 4 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	14	7,0	8,1	7,71	0,29	3,77	0,08
PW	14	1,5	2,0	1,75	0,12	7,00	0,01
PH	14	3,3	3,8	3,68	0,15	4,15	0,02

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	20	8,2	9,0	8,54	0,26	3,00	0,07
PW	20	1,8	2,1	1,95	0,09	4,85	0,01
PH	20	3,8	4,3	4,11	0,15	3,69	0,02

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	2	8,0	8,2	8,10	–	–	–
PW	2	1,7	1,9	1,80	–	–	–
PH	2	3,8	4,1	3,95	–	–	–

*Falco tinnunculus – Phalanx 5 digiti 4 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	12	8,0	8,6	8,25	0,24	2,90	0,06
PW	12	1,8	2,3	2,03	0,14	7,06	0,02
PH	12	3,7	4,3	3,94	0,17	4,25	0,03

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	18	7,9	9,5	8,64	0,40	4,58	0,16
PW	18	2,0	2,3	2,17	0,09	4,12	0,01
PH	18	3,8	4,7	4,20	0,18	4,32	0,03

*Falco tinnunculus – Phalanx 5 digiti 4 posterior*

Table 33

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	13	7,4	9,0	8,18	0,47	5,75	0,22
PW	13	1,5	2,3	2,06	0,23	11,12	0,05
PH	13	3,7	4,3	4,00	0,20	5,00	0,04

*Falco vespertinus- – Phalanx 5 digiti 4 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	7	6,2	6,9	6,57	0,28	4,28	0,08
PW	7	1,3	1,6	1,49	0,11	7,19	0,01
PH	7	3,1	3,3	3,20	0,08	2,55	0,01

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	8	6,3	7,4	6,76	0,33	4,87	0,11
PW	8	1,4	1,7	1,57	0,10	6,57	0,01
PH	8	3,1	3,6	3,31	0,17	5,21	0,03

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	5	6,6	6,9	6,78	0,13	1,92	0,02
PW	5	1,4	1,6	1,52	0,08	5,50	0,01
PH	5	3,3	3,4	3,34	0,05	1,64	0,00

*Falco naumanni – Phalanx 5 digiti 4 posterior*

♂	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	6,90	–	–	–
PW	1	–	–	1,60	–	–	–
PH	1	–	–	3,30	–	–	–

♀	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	7,00	–	–	–
PW	1	–	–	1,40	–	–	–
PH	1	–	–	2,90	–	–	–

?	n	min.	max.	$\bar{x}$	S	S%	S <sup>2</sup>
GL	1	–	–	6,00	–	–	–
PW	1	–	–	1,50	–	–	–
PH	1	–	–	3,00	–	–	–



**MEASUREMENTS RATIO TABLES**  
**(TABLES 34-66)**



Table 34

*Falco subbuteo* – Cranium*Falco columbarius* – Cranium

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
CL/RL	10	1,78	1,95	1,86	CL/RL	14	1,76	2,10	1,91
CL/GW	10	1,11	1,17	1,15	CL/GW	13	1,16	1,25	1,19
GW/GH	9	1,34	1,42	1,37	GW/GH	12	1,25	1,39	1,31
GW/TW	8	1,02	1,06	1,03	GW/TW	13	0,97	1,05	1,01
GW/ MW	10	2,49	3,35	2,81	GW/ MW	13	2,93	3,80	3,23
TW/FW	8	1,23	1,29	1,25	TW/FW	14	1,20	1,27	1,23

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
CL/RL	5	1,72	1,83	1,77	CL/RL	17	1,71	1,86	1,79
CL/GW	4	1,14	1,17	1,16	CL/GW	15	1,15	1,25	1,20
GW/GH	4	1,32	1,38	1,35	GW/GH	15	1,27	1,35	1,30
GW/TW	4	1,03	1,04	1,03	GW/TW	15	0,99	1,05	1,01
GW/ MW	4	2,64	2,91	2,75	GW/ MW	15	2,76	3,47	3,04
TW/FW	7	1,19	1,30	1,25	TW/FW	15	1,20	1,27	1,23

?	n	min.	max.	$\bar{x}$
CL/RL	3	1,68	1,92	1,80
CL/GW	2	1,16	1,16	1,16
GW/GH	2	1,31	1,35	1,33
GW/TW	1	–	–	1,08
GW/ MW	2	2,99	3,11	3,05
TW/FW	2	1,20	1,24	1,22

*Falco tinnunculus* – Cranium*Falco vespertinus* – Cranium

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
CL/RL	14	1,75	1,99	1,92	CL/RL	9	1,68	1,88	1,82
CL/GW	13	1,12	1,22	1,17	CL/GW	8	1,12	1,21	1,15
GW/GH	13	1,26	1,41	1,34	GW/GH	8	1,28	1,40	1,34
GW/TW	13	0,97	1,05	1,00	GW/TW	7	0,98	1,03	1,01
GW/ MW	13	2,91	3,75	3,14	GW/ MW	8	2,77	3,13	2,94
TW/FW	13	1,22	1,29	1,26	TW/FW	7	1,28	1,34	1,31

Table 34

*Falco tinnunculus* – Cranium*Falco vespertinus* – Cranium

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
CL/RL	21	1,76	1,99	1,89	CL/RL	12	1,68	1,84	1,77
CL/GW	22	1,12	1,24	1,17	CL/GW	12	1,10	1,20	1,16
GW/GH	21	1,25	1,42	1,34	GW/GH	12	1,27	1,37	1,33
GW/TW	20	0,95	1,06	1,00	GW/TW	11	0,98	1,02	1,00
GW/ MW	21	2,74	3,53	3,09	GW/ MW	11	2,63	3,31	2,91
TW/FW	20	1,23	1,36	1,28	TW/FW	11	1,28	1,33	1,31

?	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
CL/RL	12	1,80	2,03	1,91	CL/RL	6	1,73	1,92	1,81
CL/GW	11	1,11	1,25	1,18	CL/GW	4	1,09	1,23	1,17
GW/GH	9	1,30	1,38	1,32	GW/GH	4	1,27	1,38	1,33
GW/TW	10	0,94	1,03	1,00	GW/TW	4	0,98	1,06	1,01
GW/MW	11	2,72	4,27	3,17	GW/ MW	4	2,77	3,10	2,92
TW/FW	10	1,23	1,32	1,27	TW/FW	5	1,28	1,31	1,29

*Falco naumanni* – Cranium

♂	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
CL/RL	1	–	–	1,75	CL/RL	1	–	–	1,72
CL/GW	1	–	–	1,18	CL/GW	1	–	–	1,15
GW/GH	1	–	–	1,27	GW/GH	1	–	–	1,28
GW/TW	1	–	–	1,03	GW/TW	1	–	–	1,01
GW/ MW	1	–	–	3,22	GW/ MW	1	–	–	2,78
TW/FW	1	–	–	1,25	TW/FW	1	–	–	1,26



Table 35

*Falco subbuteo* – Mandibula*Falco columbarius* – Mandibula

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/GW	9	1,19	1,28	1,22	GL/GW	13	1,16	1,25	1,20
GL/RH	10	6,59	7,46	6,98	GL/RH	14	6,81	7,58	7,08
GW/SL	9	5,40	6,22	5,71	GW/SL	13	5,15	5,83	5,44

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/GW	5	1,16	1,26	1,21	GL/GW	17	1,18	1,26	1,22
GL/RH	6	6,66	7,15	6,88	GL/RH	19	6,80	7,45	7,10
GW/SL	5	5,64	6,20	5,86	GW/SL	17	5,00	5,86	5,35

?	n	min.	max.	$\bar{x}$
GL/GW	3	1,20	1,23	1,22
GL/RH	3	7,19	7,27	7,23
GW/SL	3	5,04	5,76	5,42

*Falco tinnunculus* – Mandibula*Falco vespertinus* – Mandibula

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/GW	14	1,12	1,22	1,17	GL/GW	8	1,15	1,25	1,19
GL/RH	14	6,76	7,36	7,01	GL/RH	9	6,24	6,95	6,51
GW/SL	14	5,20	6,23	5,90	GW/SL	8	4,87	5,97	5,51

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/GW	22	1,09	1,24	1,16	GL/GW	12	1,12	1,24	1,18
GL/RH	23	6,33	7,32	6,91	GL/RH	13	6,04	6,83	6,40
GW/SL	22	5,48	6,68	5,91	GW/SL	12	5,30	6,10	5,56

?	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
GL/GW	11	1,10	1,23	1,16	GL/GW	5	1,18	1,23	1,21
GL/RH	12	6,47	7,71	7,01	GL/RH	5	6,24	7,27	6,68
GW/SL	11	5,67	6,55	6,10	GW/SL	5	5,44	5,76	5,61

*Falco naumanni* – Mandibula

♂	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/GW	1	–	–	1,19	GL/GW	1	–	–	1,19
GL/RH	1	–	–	6,50	GL/RH	1	–	–	6,30
GW/SL	1	–	–	5,60	GW/SL	1	–	–	5,50

Table 36

*Falco subbuteo* – *Quadratum**Falco columbarius* – *Quadratum*

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GH/GW	10	1,13	1,21	1,17	GH/GW	14	1,09	1,24	1,16
MW/CW	10	2,27	2,72	2,49	MW/CW	14	2,31	2,86	2,50

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GH/GW	6	1,12	1,19	1,15	GH/GW	19	1,07	1,20	1,14
MW/CW	7	2,06	2,70	2,34	MW/CW	20	2,12	2,67	2,39

?	n	min.	max.	$\bar{x}$
GH/GW	4	1,08	1,19	1,13
MW/CW	4	2,27	3,05	2,53

*Falco tinnunculus* – *Quadratum**Falco vespertinus* – *Quadratum*

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GH/GW	13	1,08	1,24	1,16	GH/GW	7	1,03	1,15	1,09
MW/CW	13	2,39	2,81	2,59	MW/CW	7	2,69	3,61	3,05

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GH/GW	22	1,00	1,20	1,13	GH/GW	11	0,09	1,15	1,07
MW/CW	22	2,23	2,81	2,52	MW/CW	12	2,78	3,35	3,10

?	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
GH/GW	12	1,07	1,23	1,15	GH/GW	6	1,02	1,10	1,06
MW/CW	12	2,30	2,76	2,52	MW/CW	6	2,77	3,21	3,05

*Falco naumanni* – *Quadratum*

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GH/GW	1	–	–	1,14	GH/GW	–	–	–	–
MW/CW	1	–	–	2,56	MW/CW	1	–	–	3,15

Table 37

*Falco subbuteo* – Coracoideum*Falco columbarius* – Coracoideum

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/ML	14	1,07	1,12	1,09	GL/ML	15	1,05	1,08	1,07
GL/CW	14	9,80	11,21	10,50	GL/CW	15	10,75	12,32	11,50
GL/AW	14	2,47	2,76	2,63	GL/AW	15	2,84	3,08	2,94
GW/AW	14	1,01	1,05	1,03	GW/AW	15	0,97	1,04	1,02

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/ML	11	1,06	1,11	1,09	GL/ML	20	1,05	1,08	1,07
GL/CW	11	9,88	11,47	10,50	GL/CW	20	11,00	12,26	11,68
GL/AW	11	2,45	2,82	2,63	GL/AW	20	2,81	3,12	2,94
GW/AW	11	1,01	1,05	1,03	GW/AW	20	0,99	1,06	1,03

?	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
GL/ML	3	1,09	1,10	1,09	GL/ML	2	1,06	1,07	1,06
GL/CW	3	10,18	10,55	10,34	GL/CW	2	12,07	12,32	12,19
GL/AW	3	2,53	2,72	2,64	GL/AW	2	3,02	3,08	3,05
GW/AW	3	1,02	1,05	1,03	GW/AW	2	1,01	1,02	1,01

*Falco eleonorae* – Coracoideum

♂	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
GL/ML	1	–	–	1,11	GL/ML	2	1,07	1,09	1,08
GL/CW	1	–	–	10,19	GL/CW	2	9,00	9,50	9,25
GL/AW	1	–	–	2,58	GL/AW	2	2,57	2,64	2,60
GW/AW	1	–	–	1,01	GW/AW	2	0,99	1,02	1,00

*Falco tinnunculus* – Coracoideum*Falco vespertinus* – Coracoideum

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/ML	21	1,07	1,12	1,09	GL/ML	11	1,06	1,08	1,07
GL/CW	21	9,45	12,04	10,48	GL/CW	11	10,15	11,79	11,05
GL/AW	21	2,29	2,85	2,58	GL/AW	11	2,51	2,92	2,68
GW/AW	21	0,97	1,01	0,99	GW/AW	11	0,99	1,04	1,01

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/ML	28	1,07	1,12	1,09	GL/ML	13	1,05	1,09	1,07
GL/CW	28	9,52	12,35	10,76	GL/CW	13	10,52	11,88	11,18
GL/AW	28	2,37	2,84	2,58	GL/AW	13	2,54	2,83	2,68
GW/AW	27	0,97	1,02	1,00	GW/AW	13	0,99	1,03	1,02

Table 37

*Falco tinnunculus – Coracoideum**Falco vespertinus – Coracoideum*

?	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
GL/ML	16	1,07	1,12	1,09	GL/ML	9	1,06	1,10	1,08
GL/CW	16	9,16	11,92	10,54	GL/CW	9	10,27	12,52	11,32
GL/AW	16	2,43	2,74	2,58	GL/AW	9	2,54	2,91	2,74
GW/AW	16	0,97	1,02	0,99	GW/AW	10	0,99	1,05	1,01

*Falco naumanni – Coracoideum*

♂	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/ML	3	1,10	1,11	1,10	GL/ML	2	1,08	1,11	1,09
GL/CW	3	9,25	10,33	9,78	GL/CW	2	9,55	10,32	9,93
GL/AW	3	2,19	2,41	2,31	GL/AW	2	2,48	2,55	2,51
GW/AW	3	0,97	1,00	0,99	GW/AW	2	1,01	1,04	1,02

?	n	min.	max.	$\bar{x}$
GL/ML	1	–	–	1,11
GL/CW	1	–	–	11,13
GL/AW	1	–	–	2,64
GW/AW	1	–	–	1,04

Table 38

*Falco subbuteo* – Scapula*Falco columbarius* – Scapula

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/GW	13	3,93	4,36	4,11	GL/GW	15	4,19	4,81	4,49
GL/CW	13	13,36	15,54	14,39	GL/CW	15	13,62	17,15	14,90
GL/GH	13	9,12	10,23	10,00	GL/GH	15	8,95	11,32	10,12
GW/CW	14	3,14	3,71	3,52	GW/CW	16	3,08	3,85	3,32

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/GW	11	3,99	4,52	4,16	GL/GW	20	4,35	4,79	4,52
GL/CW	11	13,45	15,80	14,89	GL/CW	20	13,41	15,96	14,98
GL/GH	11	9,46	11,26	10,22	GL/GH	20	9,05	11,54	10,19
GW/CW	11	3,21	3,88	3,58	GW/CW	20	3,04	3,54	3,31

?	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
GL/GW	3	4,18	4,22	4,20	GL/GW	2	4,35	4,47	4,41
GL/CW	3	15,00	16,71	15,61	GL/CW	2	14,12	15,04	14,58
GL/GH	3	10,02	10,26	10,12	GL/GH	2	10,03	10,38	10,20
GW/CW	3	3,58	4,00	3,72	GW/CW	2	3,16	3,46	3,31

*Falco eleonora* – Scapula

♂	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
GL/GW	1	–	–	4,23	GL/GW	1	–	–	3,94
GL/CW	1	–	–	16,03	GL/CW	1	–	–	13,31
GL/GH	1	–	–	10,95	GL/GH	1	–	–	9,91
GW/CW	1	–	–	3,78	GW/CW	1	–	–	3,37

*Falco tinnunculus* – Scapula*Falco vespertinus* – Scapula

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/GW	21	4,34	4,83	4,54	GL/GW	11	4,29	4,98	4,59
GL/CW	21	12,74	17,65	14,78	GL/CW	11	14,45	16,45	15,27
GL/GH	21	10,23	12,64	11,49	GL/GH	11	10,65	13,04	11,75
GW/CW	21	2,78	3,75	3,26	GW/CW	11	3,04	3,60	3,33

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/GW	27	4,06	4,86	4,50	GL/GW	12	4,34	4,87	4,52
GL/CW	27	12,96	16,73	15,20	GL/CW	12	13,72	16,00	15,17
GL/GH	27	9,89	13,00	11,32	GL/GH	12	11,00	12,92	11,72
GW/CW	27	3,11	3,68	3,37	GW/CW	13	3,14	3,60	3,35

Table 38

*Falco tinnunculus* – Scapula*Falco vespertinus* – Scapula

?	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
GL/GW	15	4,17	4,86	4,52	GL/GW	6	4,31	4,88	4,61
GL/CW	15	13,30	16,55	14,93	GL/CW	6	14,32	16,20	15,55
GL/GH	15	10,26	12,26	11,23	GL/GH	6	10,90	12,14	11,73
GW/CW	16	3,00	3,85	3,31	GW/CW	9	3,27	3,90	3,48

*Falco naumanni* – Scapula

♂	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/GW	3	4,27	4,69	4,53	GL/GW	2	4,31	4,49	4,40
GL/CW	3	13,64	16,79	15,10	GL/CW	2	14,65	15,50	15,07
GL/GH	3	9,97	12,00	11,17	GL/GH	2	11,07	12,74	11,90
GW/CW	3	2,91	3,63	3,34	GW/CW	2	3,40	3,45	3,42

*Falco subbuteo* – Humerus*Falco columbarius* – Humerus

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/PW	11	4,13	4,53	4,29	GL/PW	15	3,91	4,40	4,15
GL/CT	11	2,78	3,11	2,91	GL/CT	15	2,75	2,95	2,87
GL/CW	11	11,10	11,79	11,41	GL/CW	15	10,45	11,72	11,02
GL/DW	11	5,03	5,30	5,17	GL/DW	15	4,71	5,71	4,98

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	6	4,12	4,45	4,28	GL/PW	21	4,01	4,35	4,19
GL/CT	6	2,87	3,07	2,96	GL/CT	21	2,83	3,02	2,92
GL/CW	6	11,44	12,50	11,87	GL/CW	21	10,98	12,27	11,53
GL/DW	6	5,15	5,36	5,24	GL/DW	21	4,85	5,26	5,05

?	n	min.	max.	$\bar{x}$
GL/PW	2	4,04	4,22	4,13
GL/CT	2	2,83	2,84	2,83
GL/CW	2	10,48	11,58	11,03
GL/DW	2	4,80	5,08	4,94

*Falco eleonorae* – Humerus

♂	n	min.	max.	$\bar{x}$
GL/PW	1	–	–	4,40
GL/CT	1	–	–	3,71
GL/CW	1	–	–	12,87
GL/DW	1	–	–	5,68

*Falco tinnunculus* – Humerus*Falco vespertinus* – Humerus

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/PW	16	4,35	4,98	4,62	GL/PW	10	4,57	5,11	4,71
GL/CT	16	3,11	3,54	3,29	GL/CT	10	3,29	3,63	3,41
GL/CW	16	11,93	13,00	12,55	GL/CW	10	12,67	14,32	13,39
GL/DW	16	5,34	5,85	5,60	GL/DW	10	5,54	5,96	5,76

Table 39

*Falco tinnunculus – Humerus**Falco vespertinus – Humerus*

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	25	4,35	4,81	4,55	GL/PW	13	4,36	4,84	4,63
GL/CT	25	3,07	3,57	3,27	GL/CT	13	3,20	3,51	3,36
GL/CW	25	11,45	13,95	12,48	GL/CW	14	12,69	14,08	13,33
GL/DW	25	5,26	5,83	5,57	GL/DW	14	5,44	6,01	5,77

?	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
GL/PW	13	4,31	5,05	4,62	GL/PW	7	4,51	5,02	4,76
GL/CT	13	3,12	3,52	3,28	GL/CT	7	3,21	3,60	3,42
GL/CW	13	11,71	13,02	12,48	GL/CW	7	12,77	14,22	13,45
GL/DW	13	5,33	6,01	5,60	GL/DW	7	5,73	6,11	5,88

*Falco naumanni – Humerus*

♂	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
GL/PW	2	4,81	5,22	5,01	GL/PW	2	4,92	5,00	4,96
GL/CT	2	3,54	3,65	3,59	GL/CT	2	3,55	3,73	3,64
GL/CW	2	13,05	13,36	13,20	GL/CW	2	11,95	13,63	12,79
GL/DW	2	5,86	6,05	5,95	GL/DW	2	5,70	5,75	5,72



Table 40

*Falco subbuteo* – Radius*Falco columbarius* – Radius

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/CW	11	25,73	30,78	29,22	GL/CW	16	25,17	30,00	27,46
GL/DW	11	10,85	11,55	11,15	GL/DW	16	10,07	11,53	11,07
GL/DD	11	14,45	15,97	15,08	GL/DD	16	14,16	16,00	15,05

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/CW	7	27,64	30,85	29,72	GL/CW	21	26,84	30,53	27,98
GL/DW	7	11,26	12,11	11,61	GL/DW	21	10,85	11,75	11,27
GL/DD	7	14,35	16,40	15,29	GL/DD	21	14,44	16,72	15,72

?	n	min.	max.	$\bar{x}$
GL/CW	2	26,72	28,33	27,52
GL/DW	2	10,93	11,33	11,13
GL/DD	2	15,03	15,45	15,24

*Falco tinnunculus* – Radius*Falco vespertinus* – Radius

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/CW	17	27,70	35,44	30,98	GL/CW	10	29,39	33,73	31,40
GL/DW	17	10,78	13,50	12,12	GL/DW	10	11,82	12,98	12,47
GL/DD	17	16,81	20,25	18,53	GL/DD	10	17,10	19,96	18,56

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/CW	25	28,79	36,29	31,65	GL/CW	13	29,44	36,50	32,00
GL/DW	25	11,02	13,18	12,19	GL/DW	13	11,28	13,17	12,40
GL/DD	25	16,23	21,27	18,20	GL/DD	13	16,61	20,44	18,57

?	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
GL/CW	14	27,40	37,07	30,97	GL/CW	7	28,16	41,23	34,21
GL/DW	14	11,18	12,94	11,96	GL/DW	7	12,37	13,74	13,03
GL/DD	14	16,68	19,58	18,16	GL/DD	7	18,34	22,33	19,53

*Falco naumanni* – Radius

♂	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/CW	1	–	–	30,53	GL/CW	1	–	–	30,23
GL/DW	1	–	–	12,36	GL/DW	1	–	–	11,68
GL/DD	1	–	–	19,96	GL/DD	1	–	–	19,04

Table 40

*Falco naumanni – Radius*

?	n	min.	max.	$\bar{x}$
GL/CW	1	–	–	35,93
GL/DW	1	–	–	11,43
GL/DD	1	–	–	20,96

Table 41

*Falco subbuteo* – Ulna*Falco columbarius* – Ulna

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/PW	11	8,07	8,69	8,36	GL/PW	15	7,70	8,62	8,29
GL/PH	10	8,45	9,09	8,84	GL/PH	15	8,22	9,03	8,62
GL/CW	11	14,37	15,87	15,26	GL/CW	15	14,71	16,45	15,26
GL/DT	11	8,31	9,07	8,65	GL/DT	15	8,08	8,88	8,56
PW/PH	10	0,99	1,10	1,05	PW/PH	15	1,00	1,07	1,04

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	7	8,18	8,94	8,51	GL/PW	21	7,97	8,58	8,28
GL/PH	7	8,75	9,51	9,03	GL/PH	21	8,32	9,01	8,69
GL/CW	7	15,00	16,05	15,48	GL/CW	21	14,61	16,32	15,46
GL/DT	7	8,52	9,01	8,70	GL/DT	21	8,16	8,88	8,54
PW/PH	7	1,04	1,13	1,07	PW/PH	21	1,00	1,09	1,05

?	n	min.	max.	$\bar{x}$
GL/PW	2	8,19	8,31	8,25
GL/PH	2	8,45	8,57	8,51
GL/CW	2	14,97	15,47	15,22
GL/DT	2	8,57	8,59	8,58
PW/PH	2	1,03	1,03	1,03

*Falco eleonorae* – Ulna

?	n	min.	max.	$\bar{x}$
GL/PW	–	–	–	–
GL/PH	–	–	–	–
GL/CW	1	–	–	14,75
GL/DT	1	–	–	9,96
PW/PH	–	–	–	–

*Falco tinnunculus* – Ulna*Falco vespertinus* – Ulna

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/PW	17	8,45	9,51	9,06	GL/PW	10	8,81	9,71	9,33
GL/PH	17	9,11	10,47	9,90	GL/PH	10	9,41	10,56	9,73
GL/CW	17	15,76	17,82	16,82	GL/CW	10	15,40	17,28	16,36
GL/DT	17	8,92	9,95	9,53	GL/DT	10	9,06	10,03	9,38
PW/PH	17	1,06	1,13	1,09	PW/PH	10	1,00	1,09	1,04

Table 41

*Falco tinnunculus* – Ulna*Falco vespertinus* – Ulna

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	25	8,59	9,36	9,01	GL/PW	14	8,79	9,59	9,19
GL/PH	25	9,07	10,21	9,81	GL/PH	14	9,12	10,23	9,62
GL/CW	25	15,60	18,61	16,71	GL/CW	14	15,05	17,90	16,22
GL/DT	25	9,00	9,80	9,38	GL/DT	14	8,91	9,73	9,27
PW/PH	25	1,03	1,13	1,09	PW/PH	14	1,00	1,09	1,05

?	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
GL/PW	12	8,65	9,64	9,03	GL/PW	7	9,00	9,96	9,57
GL/PH	12	9,18	10,40	9,86	GL/PH	7	9,14	10,65	10,03
GL/CW	12	15,49	17,88	16,46	GL/CW	7	16,00	18,12	16,94
GL/DT	12	9,03	9,84	9,43	GL/DT	7	9,44	9,96	9,70
PW/PH	13	1,05	1,14	1,09	PW/PH	7	1,01	1,09	1,05

*Falco naumanni* – Ulna

♂	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	1	–	–	9,74	GL/PW	1	–	–	9,00
GL/PH	1	–	–	10,28	GL/PH	1	–	–	9,46
GL/CW	2	15,28	16,82	16,05	GL/CW	1	–	–	15,25
GL/DT	2	9,74	9,82	9,78	GL/DT	1	–	–	9,15
PW/PH	1	–	–	1,05	PW/PH	1	–	–	1,05

?	n	min.	max.	$\bar{x}$
GL/PW	1	–	–	9,40
GL/PH	1	–	–	9,74
GL/CW	1	–	–	16,24
GL/DT	1	–	–	9,57
PW/PH	1	–	–	1,04

Table 42

*Falco subbuteo* – *Carpometacarpus**Falco columbarius* – *Carpometacarpus*

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/PW	11	3,49	3,77	3,58	GL/PW	16	3,25	3,90	3,51
GL/CW	11	12,92	15,21	14,06	GL/CW	16	14,00	16,55	14,84
GL/DT	11	5,40	6,08	5,68	GL/DT	16	5,24	6,02	5,56

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	7	3,48	3,78	3,61	GL/PW	20	3,42	3,66	3,54
GL/CW	7	13,33	15,27	14,12	GL/CW	20	14,42	16,33	15,18
GL/DT	7	5,43	5,82	5,63	GL/DT	20	5,44	6,02	5,73

?	n	min.	max.	$\bar{x}$
GL/PW	2	3,51	3,57	3,54
GL/CW	2	14,36	15,27	14,81
GL/DT	2	3,54	3,79	3,66

*Falco tinnunculus* – *Carpometacarpus**Falco vespertinus* – *Carpometacarpus*

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/PW	14	3,54	4,07	3,82	GL/PW	10	3,60	4,02	3,78
GL/CW	14	14,37	16,52	15,36	GL/CW	10	13,67	15,54	14,72
GL/DT	14	5,51	6,24	5,92	GL/DT	10	5,54	6,58	5,92

♀	n	min.	max.	$\bar{x}$	B	n	min.	max.	$\bar{x}$
GL/PW	25	3,63	4,01	3,80	GL/PW	14	3,59	3,93	3,73
GL/CW	25	13,78	16,91	15,31	GL/CW	14	12,65	15,76	14,21
GL/DT	25	5,41	6,17	5,86	GL/DT	14	5,54	6,14	5,84

?	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
GL/PW	13	3,68	4,13	3,84	GL/PW	7	3,66	4,02	3,86
GL/CW	13	13,14	16,76	14,96	GL/CW	7	14,17	15,14	14,77
GL/DT	13	5,54	6,29	5,88	GL/DT	7	5,79	6,40	6,12

*Falco naumanni* – *Carpometacarpus*

♂	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	2	3,97	4,00	3,98	GL/PW	1	–	–	3,77
GL/CW	2	13,83	14,54	14,18	GL/CW	1	–	–	13,21
GL/DT	2	5,89	6,04	5,96	GL/DT	1	–	–	5,56

?	n	min.	max.	$\bar{x}$
GL/PW	1	–	–	3,92
GL/CW	1	–	–	14,45
GL/DT	1	–	–	5,89

Table 43

*Falco subbuteo* – *Phalanx digiti alulae*      *Falco columbarius* – *Phalanx digiti alulae*

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/PW	11	2,32	2,78	2,56	GL/PW	16	2,31	3,25	2,63
GL/PH	11	3,67	4,31	4,00	GL/PH	16	3,46	4,08	3,80
PW/PH	11	1,48	1,67	1,56	PW/PH	16	1,14	1,65	1,45

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	4	2,52	2,71	2,62	GL/PW	21	2,45	2,88	2,60
GL/PH	4	3,82	4,33	4,09	GL/PH	21	3,63	4,21	3,94
PW/PH	4	1,51	1,60	1,56	PW/PH	21	1,40	1,67	1,51

?	n	min.	max.	$\bar{x}$
GL/PW	2	2,40	2,62	2,51
GL/PH	2	3,61	4,07	3,84
PW/PH	2	1,50	1,55	1,52

*Falco tinnunculus* – *Phalanx digiti alulae*      *Falco vespertinus* – *Phalanx digiti alulae*

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/PW	8	2,69	2,80	2,76	GL/PW	8	2,87	3,23	3,06
GL/PH	8	3,96	4,27	4,11	GL/PH	8	3,96	4,52	4,27
PW/PH	8	1,43	1,56	1,49	PW/PH	8	1,32	1,46	1,40

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	18	2,65	3,07	2,86	GL/PW	9	2,89	3,30	3,10
GL/PH	18	3,68	4,67	4,11	GL/PH	9	4,16	4,77	4,41
PW/PH	18	1,31	1,64	1,44	PW/PH	9	1,31	1,54	1,43

?	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
GL/PW	10	2,69	3,18	2,95	GL/PW	6	2,84	3,26	3,11
GL/PH	10	3,93	4,77	4,25	GL/PH	6	4,04	4,75	4,34
PW/PH	10	1,32	1,52	1,44	PW/PH	6	1,33	1,46	1,40

*Falco naumanni* – *Phalanx digiti alulae*

♂	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	1	–	–	3,14	GL/PW	1	–	–	3,11
GL/PH	1	–	–	5,00	GL/PH	1	–	–	5,09
PW/PH	1	–	–	1,59	PW/PH	1	–	–	1,64

Table 43

*Falco naumanni* – *Phalanx digiti alulae*

?	n	min.	max.	$\bar{x}$
GL/PW	1	–	–	3,06
GL/PH	1	–	–	4,73
PW/PH	1	–	–	1,54



*Falco subbuteo* –  
*Phalanx proximalis digiti majoris*

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/PW	10	3,61	4,00	3,76	GL/PW	16	3,37	3,67	3,49
GL/PH-DH	9	9,59	14,36	11,80	GL/PH-DH	15	7,53	11,00	9,27
PW/PH	10	0,93	1,13	1,03	PW/PH	16	0,90	1,05	1,00
PH/DH	9	1,38	1,63	1,50	PH/DH	15	1,50	1,74	1,62

*Falco columbarius* –  
*Phalanx proximalis digiti majoris*

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	6	3,53	3,83	3,69	GL/PW	21	3,37	3,84	3,64
GL/PH-DH	6	9,76	12,77	11,35	GL/PH-DH	20	8,59	10,47	9,28
PW/PH	6	1,00	1,10	1,05	PW/PH	21	0,90	1,05	0,97
PH/DH	6	1,48	1,57	1,52	PH/DH	20	1,56	1,68	1,61

?	n	min.	max.	$\bar{x}$
GL/PW	2	3,42	3,67	3,54
GL/PH-DH	2	8,67	9,19	8,93
PW/PH	2	0,97	1,00	0,98
PH/DH	2	1,64	1,65	1,64

*Falco tinnunculus* –  
*Phalanx proximalis digiti majoris*

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/PW	13	3,55	4,03	3,75	GL/PW	10	3,54	4,23	3,82
GL/PH-DH	13	9,33	17,75	12,00	GL/PH-DH	10	10,57	14,40	11,80
PW/PH	13	0,93	1,08	0,98	PW/PH	10	0,90	1,03	0,96
PH/DH	13	1,27	1,60	1,46	PH/DH	10	1,38	1,54	1,45

*Falco vespertinus* –  
*Phalanx proximalis digiti majoris*

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	24	3,34	4,00	3,74	GL/PW	14	3,53	4,22	3,78
GL/PH-DH	24	9,47	14,27	11,55	GL/PH-DH	14	10,13	16,00	12,62
PW/PH	24	0,91	1,05	0,98	PW/PH	14	0,86	1,05	0,99
PH/DH	24	1,37	1,55	1,47	PH/DH	14	1,32	1,54	1,43

Table 44

*Falco tinnunculus* –  
*Phalanx proximalis digiti majoris*

*Falco vespertinus* –  
*Phalanx proximalis digiti majoris*

?	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
GL/PW	14	3,55	3,97	3,77	GL/PW	7	3,57	4,06	3,82
GL/PH-DH	14	10,57	14,00	12,04	GL/PH-DH	7	10,00	15,67	12,36
PW/PH	14	0,93	1,07	0,97	PW/PH	7	0,90	1,06	0,98
PH/DH	14	1,38	1,50	1,44	PH/DH	7	1,36	1,56	1,45

*Falco naumanni* – *Phalanx proximalis digiti majoris*

♂	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	1	–	–	4,12	GL/PW	1	–	–	3,83
GL/PH-DH	–	–	–	–	GL/PH-DH	–	–	–	–
PW/PH	1	–	–	0,94	PW/PH	1	–	–	1,03
PH/DH	–	–	–	–	PH/DH	–	–	–	–

?	n	min.	max.	$\bar{x}$
GL/PW	1	–	–	3,88
GL/PH-DH	1	–	–	12,00
PW/PH	1	–	–	1,00
PH/DH	1	–	–	1,48

*Falco subbuteo* –  
*Phalanx distalis digiti majoris*

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/PW	9	4,97	5,61	5,22	GL/PW	11	4,37	5,00	4,62
GL/PH	9	3,54	3,92	3,75	GL/PH	11	3,14	3,61	3,31
PW/PH	10	0,68	0,76	0,72	PW/PH	12	0,65	0,79	0,72

*Falco columbarius* –  
*Phalanx distalis digiti majoris*

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	6	4,79	5,50	5,11	GL/PW	19	4,43	5,11	4,72
GL/PH	6	3,56	3,75	3,66	GL/PH	19	3,24	3,85	3,38
PW/PH	6	0,68	0,76	0,72	PW/PH	19	0,67	0,82	0,71

?	n	min.	max.	$\bar{x}$
GL/PW	1	–	–	4,64
GL/PH	1	–	–	3,41
PW/PH	1	–	–	0,74

*Falco tinnunculus* –  
*Phalanx distalis digiti majoris*

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/PW	9	4,65	5,18	4,97	GL/PW	7	4,74	5,44	5,12
GL/PH	9	3,54	4,00	3,81	GL/PH	7	3,55	4,03	3,80
PW/PH	10	0,72	0,83	0,76	PW/PH	8	0,70	0,76	0,74

*Falco vespertinus* –  
*Phalanx distalis digiti majoris*

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	20	4,50	5,22	4,82	GL/PW	12	4,71	5,62	5,19
GL/PH	20	3,40	4,03	3,68	GL/PH	12	3,57	4,12	3,81
PW/PH	20	0,72	0,82	0,76	PW/PH	12	0,67	0,80	0,74

?	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
GL/PW	12	4,48	5,32	4,85	GL/PW	6	4,92	5,64	5,25
GL/PH	12	3,50	4,17	3,80	GL/PH	6	3,50	3,92	3,74
PW/PH	12	0,74	0,83	0,78	PW/PH	6	0,69	0,75	0,71

*Falco naumanni* – *Phalanx distalis digiti majoris*

♂	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	1	–	–	5,60	GL/PW	1	–	–	5,52
GL/PH	1	–	–	3,89	GL/PH	1	–	–	3,94
PW/PH	1	–	–	0,69	PW/PH	1	–	–	0,71

?	n	min.	max.	$\bar{x}$
GL/PW	–	–	–	–
GL/PH	–	–	–	–
PW/PH	1	–	–	0,72

Table 46

*Falco subbuteo* – *Phalanx digiti minoris*    *Falco columbarius* – *Phalanx digiti minoris*

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/PW	8	3,47	4,33	3,74	GL/PW	14	3,12	3,87	3,49
GL/GW	8	3,13	3,90	3,45	GL/GW	14	3,12	4,14	3,59
GL/GH	8	4,12	5,20	4,67	GL/GH	14	4,00	5,80	4,67
GW/PW	8	0,95	1,19	1,09	GW/PW	14	0,93	1,06	0,97
GW/GH	8	1,25	1,60	1,36	GW/GH	14	1,07	1,60	1,30

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	6	3,52	4,41	3,93	GL/PW	19	3,21	4,06	3,63
GL/GW	6	3,22	3,75	3,45	GL/GW	19	3,05	4,33	3,72
GL/GH	6	4,39	5,00	4,86	GL/GH	19	4,14	5,50	4,91
GW/PW	6	1,09	1,20	1,14	GW/PW	19	0,85	1,06	0,98
GW/GH	6	1,28	1,53	1,41	GW/GH	19	1,13	1,58	1,33

?	n	min.	max.	$\bar{x}$
GL/PW	2	3,53	3,69	3,61
GL/GW	2	3,53	3,69	3,61
GL/GH	2	5,15	5,36	5,25
GW/PW	2	1,00	1,00	1,00
GW/GH	2	1,45	1,46	1,45

*Falco tinnunculus* – *Phalanx digiti minoris*    *Falco vespertinus* – *Phalanx digiti minoris*

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/PW	9	3,39	4,69	3,96	GL/PW	7	3,47	4,67	3,99
GL/GW	9	3,05	4,00	3,45	GL/GW	7	3,25	4,37	3,65
GL/GH	9	5,08	6,54	5,58	GL/GH	7	5,36	6,36	5,69
GW/PW	9	1,10	1,25	1,15	GW/PW	7	0,88	1,25	1,10
GW/GH	9	1,54	1,75	1,62	GW/GH	7	1,36	1,82	1,57

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	10	3,00	4,44	3,66	GL/PW	6	3,37	3,94	3,69
GL/GW	10	2,69	3,95	3,34	GL/GW	6	2,91	3,38	3,23
GL/GH	9	4,07	6,15	5,29	GL/GH	6	4,61	5,58	5,16
GW/PW	10	1,00	1,22	1,10	GW/PW	6	1,06	1,18	1,14
GW/GH	9	1,43	1,75	1,59	GW/GH	6	1,38	1,83	1,60

Table 46

*Falco tinnunculus* – *Phalanx digiti minoris**Falco vespertinus* – *Phalanx digiti minoris*

?	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
GL/PW	9	3,38	4,33	3,81	GL/PW	6	3,56	4,25	3,89
GL/GW	9	3,17	3,54	3,31	GL/GW	6	3,31	4,07	3,60
GL/GH	9	4,87	5,67	5,37	GL/GH	6	4,85	6,20	5,40
GW/PW	9	1,05	1,28	1,15	GW/PW	6	0,87	1,20	1,09
GW/GH	9	1,47	1,77	1,62	GW/GH	6	1,27	1,80	1,50

*Falco naumanni* – *Phalanx digiti minoris*

♂	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	1	–	–	3,67	GL/PW	1	–	–	3,53
GL/GW	1	–	–	3,30	GL/GW	1	–	–	3,16
GL/GH	1	–	–	5,50	GL/GH	1	–	–	5,45
GW/PW	1	–	–	1,11	GW/PW	1	–	–	1,12
GW/GH	1	–	–	1,67	GW/GH	1	–	–	1,73

?	n	min.	max.	$\bar{x}$
GL/PW	1	–	–	3,62
GL/GW	1	–	–	3,62
GL/GH	1	–	–	5,80
GW/PW	1	–	–	1,00
GW/GH	1	–	–	1,60

Table 47

*Falco subbuteo* – Sternum*Falco columbarius*– Sternum

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/CL	13	0,96	1,02	0,99	GL/CL	14	0,99	1,02	1,00
GL/CH	14	1,95	2,28	2,12	GL/CH	15	2,06	2,24	2,14
GL/MW	14	1,68	1,91	1,77	GL/MW	14	1,61	1,77	1,67
CH/MW	14	0,79	0,91	0,83	CH/MW	14	0,72	0,83	0,78

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/CL	9	0,99	1,06	1,01	GL/CL	20	0,97	1,03	1,00
GL/CH	9	2,09	2,24	2,16	GL/CH	20	2,02	2,29	2,14
GL/MW	9	1,57	1,87	1,73	GL/MW	19	1,56	1,75	1,65
CH/MW	9	0,73	0,87	0,80	CH/MW	19	0,71	0,82	0,77

?	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
GL/CL	3	0,99	1,02	1,00	GL/CL	2	0,98	1,01	0,99
GL/CH	3	2,06	2,17	2,11	GL/CH	2	2,06	2,17	2,11
GL/MW	3	1,65	1,81	1,71	GL/MW	2	1,64	1,68	1,66
CH/MW	3	0,77	0,87	0,81	CH/MW	2	0,78	0,80	0,79

*Falco eleonorae* – Sternum

♂	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
GL/CL	1	–	–	1,00	GL/CL	2	1,01	1,06	1,03
GL/CH	1	–	–	2,11	GL/CH	2	2,19	2,25	2,22
GL/MW	1	–	–	1,69	GL/MW	–	–	–	–
CH/MW	1	–	–	0,80	CH/MW	–	–	–	–

*Falco tinnunculus* – Sternum*Falco vespertinus* – Sternum

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/CL	22	1,04	1,19	1,12	GL/CL	11	1,06	1,14	1,09
GL/CH	22	2,01	2,34	2,21	GL/CH	11	2,16	2,41	2,27
GL/MW	22	1,42	1,70	1,56	GL/MW	11	1,56	1,79	1,66
CH/MW	22	0,64	0,78	0,71	CH/MW	11	0,67	0,80	0,73

Table 47

*Falco tinnunculus* – Sternum*Falco vespertinus* – Sternum

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/CL	23	1,03	1,15	1,12	GL/CL	13	1,05	1,14	1,10
GL/CH	23	2,08	2,38	2,23	GL/CH	13	2,22	2,34	2,28
GL/MW	22	1,42	1,65	1,55	GL/MW	11	1,53	1,78	1,62
CH/MW	22	0,62	0,77	0,70	CH/MW	11	0,67	0,80	0,71

?	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
GL/CL	16	1,08	1,18	1,12	GL/CL	7	1,05	1,14	1,09
GL/CH	16	2,11	2,36	2,23	GL/CH	7	2,17	2,37	2,27
GL/MW	16	1,39	1,74	1,54	GL/MW	6	1,59	1,72	1,64
CH/MW	16	0,61	0,77	0,72	CH/MW	6	0,67	0,76	0,72

*Falco naumanni* – Sternum

♂	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/CL	3	1,08	1,14	1,10	GL/CL	2	1,07	1,10	1,08
GL/CH	3	2,14	2,26	2,20	GL/CH	2	2,13	2,25	2,19
GL/MW	3	1,53	1,67	1,59	GL/MW	2	1,48	1,56	1,52
CH/MW	3	0,69	0,78	0,72	CH/MW	2	0,66	0,73	0,69



Table 48

*Falco subbuteo* – Pelvis*Falco columbarius* – Pelvis

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
ML/AW	13	1,17	1,31	1,26	ML/AW	16	1,17	1,32	1,23
ML/GW	12	1,20	1,37	1,29	ML/GW	15	1,16	1,44	1,29
AW/MW	13	1,72	2,14	1,89	AW/MW	16	1,84	2,04	1,94
AW/AA	14	1,36	1,44	1,40	AW/AA	16	1,38	1,44	1,41
AA/AD	14	5,03	6,21	5,56	AA/AD	16	4,83	5,97	5,17
GW/AW	12	0,93	1,07	0,98	GW/AW	15	0,90	1,03	0,96

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
ML/AW	10	1,19	1,35	1,26	ML/AW	18	1,19	1,30	1,25
ML/GW	10	1,17	1,31	1,25	ML/GW	17	1,26	1,42	1,31
AW/MW	10	1,75	2,19	1,89	AW/MW	18	1,81	2,14	1,94
AW/AA	10	1,36	1,41	1,39	AW/AA	19	1,39	1,44	1,42
AA/AD	10	4,95	5,94	5,53	AA/AD	19	4,70	5,65	5,11
GW/AW	10	0,93	1,07	1,01	GW/AW	18	0,87	1,03	0,96

?	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
ML/AW	2	1,26	1,34	1,30	ML/AW	1	–	–	1,20
ML/GW	2	1,27	1,31	1,29	ML/GW	1	–	–	1,26
AW/MW	2	1,81	1,88	1,84	AW/MW	1	–	–	2,04
AW/AA	2	1,40	1,44	1,42	AW/AA	1	–	–	1,49
AA/AD	2	4,87	5,00	4,93	AA/AD	1	–	–	4,71
GW/AW	2	1,00	1,02	1,01	GW/AW	1	–	–	0,95

*Falco eleonorae* – Pelvis

?	n	min.	max.	$\bar{x}$
ML/AW	2	1,20	1,27	1,23
ML/GW	1	–	–	1,32
AW/MW	1	–	–	1,91
AW/AA	1	–	–	1,39
AA/AD	1	–	–	5,70
GW/AW	1	–	–	0,96

Table 48

*Falco tinnunculus* – Pelvis*Falco vespertinus* – Pelvis

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
ML/AW	20	1,24	1,50	1,32	ML/AW	11	1,25	1,37	1,33
ML/GW	20	1,35	1,69	1,45	ML/GW	11	1,24	1,44	1,34
AW/MW	20	1,72	2,01	1,86	AW/MW	11	1,63	1,83	1,71
AW/AA	20	1,39	1,47	1,43	AW/AA	11	1,29	1,40	1,35
AA/AD	20	4,57	5,47	4,89	AA/AD	11	5,06	7,04	5,99
GW/AW	20	0,85	0,95	0,91	GW/AW	11	0,92	1,07	1,00

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
ML/AW	27	1,26	1,41	1,33	ML/AW	11	1,22	1,57	1,33
ML/GW	27	1,27	1,66	1,46	ML/GW	10	1,22	1,51	1,31
AW/MW	27	1,76	2,05	1,92	AW/MW	12	1,59	1,81	1,73
AW/AA	27	1,37	1,50	1,43	AW/AA	12	1,29	1,39	1,34
AA/AD	27	4,03	5,76	4,90	AA/AD	12	5,20	6,58	5,92
GW/AW	27	0,79	1,04	0,91	GW/AW	11	0,95	1,07	1,02

?	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
ML/AW	14	1,25	1,38	1,30	ML/AW	6	1,22	1,42	1,32
ML/GW	12	1,31	1,57	1,42	ML/GW	6	1,23	1,33	1,28
AW/MW	14	1,80	2,03	1,91	AW/MW	6	1,66	1,89	1,76
AW/AA	14	1,39	1,47	1,43	AW/AA	6	1,29	1,39	1,33
AA/AD	14	4,33	5,45	4,93	AA/AD	6	5,27	6,74	5,91
GW/AW	13	0,84	1,00	0,92	GW/AW	6	0,97	1,11	1,03

*Falco naumanni* – Pelvis

♂	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
ML/AW	2	1,24	1,28	1,26	ML/AW	2	1,24	1,28	1,26
ML/GW	1	–	–	1,35	ML/GW	2	1,30	1,43	1,36
AW/MW	1	–	–	1,86	AW/MW	2	1,97	2,03	2,00
AW/AA	1	–	–	1,38	AW/AA	2	1,32	1,40	1,36
AA/AD	1	–	–	6,32	AA/AD	2	6,03	6,36	6,19
GW/AW	1	–	–	0,91	GW/AW	2	0,89	0,95	0,92

*Falco subbuteo* – *Pygostylus**Falco columbarius* – *Pygostylus*

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/GH	9	2,27	2,77	2,46	GL/GH	12	2,14	2,67	2,41
GH/GW	10	1,05	1,20	1,12	GH/GW	12	1,08	1,45	1,21

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/GH	4	2,41	2,92	2,61	GL/GH	17	2,28	2,74	2,48
GH/GW	4	1,02	1,30	1,16	GH/GW	19	1,00	1,45	1,19

?	n	min.	max.	$\bar{x}$
GL/GH	2	2,31	2,46	2,38
GH/GW	2	1,13	1,22	1,17

*Falco tinnunculus* – *Pygostylus**Falco vespertinus* – *Pygostylus*

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/GH	10	2,11	2,81	2,54	GL/GH	5	2,23	2,94	2,61
GH/GW	10	1,11	1,49	1,28	GH/GW	5	1,15	1,34	1,26

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/GH	13	2,21	2,95	2,59	GL/GH	5	2,46	2,92	2,64
GH/GW	15	1,09	1,43	1,24	GH/GW	5	1,02	1,55	1,27

?	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
GL/GH	9	2,27	2,65	2,50	GL/GH	4	2,44	2,77	2,59
GH/GW	10	1,02	1,53	1,34	GH/GW	4	1,16	1,42	1,29

*Falco naumanni* – *Pygostylus*

♂	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/GH	1	–	–	2,25	GL/GH	1	–	–	2,23
GH/GW	1	–	–	1,45	GH/GW	1	–	–	1,42

*Falco subbuteo* – Femur*Falco columbarius* – Femur

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/ML	13	1,03	1,05	1,04	GL/ML	16	1,03	1,04	1,03
GL/PW	13	5,52	5,93	5,71	GL/PW	16	5,98	6,70	6,25
GL/PH	12	7,68	8,80	8,21	GL/PH	16	8,80	10,02	9,39
GL/CD	13	12,08	14,06	12,76	GL/CD	16	12,77	14,30	13,49
GL/CW	13	11,24	12,54	11,99	GL/CW	16	11,83	13,41	12,75
PW/PH	12	1,37	1,53	1,44	PW/PH	16	1,41	1,58	1,50
DW/DH	13	1,13	1,21	1,17	DW/DH	16	1,13	1,25	1,18

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/ML	11	1,03	1,05	1,04	GL/ML	21	1,02	1,04	1,03
GL/PW	11	5,58	5,87	5,70	GL/PW	21	5,90	6,42	6,19
GL/PH	11	7,63	8,83	8,18	GL/PH	21	8,38	9,31	8,92
GL/CD	11	12,00	13,09	12,65	GL/CD	21	12,43	14,21	13,27
GL/CW	11	10,98	12,11	11,58	GL/CW	21	11,95	13,64	12,79
PW/PH	11	1,34	1,55	1,44	PW/PH	21	1,35	1,54	1,44
DW/DH	11	1,13	1,27	1,19	DW/DH	21	1,14	1,31	1,21

?	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
GL/ML	1	–	–	1,04	GL/ML	2	1,02	1,03	1,02
GL/PW	1	–	–	5,79	GL/PW	2	6,12	6,56	6,38
GL/PH	1	–	–	8,53	GL/PH	2	8,83	9,10	8,96
GL/CD	1	–	–	12,91	GL/CD	2	13,50	13,51	13,50
GL/CW	1	–	–	12,22	GL/CW	2	12,05	12,75	12,40
PW/PH	2	1,44	1,47	1,45	PW/PH	2	1,39	1,44	1,41
DW/DH	1	–	–	1,20	DW/DH	2	1,16	1,21	1,18

*Falco eleonora* – Femur

♂	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
GL/ML	1	–	–	1,04	GL/ML	2	1,03	1,04	1,03
GL/PW	1	–	–	5,69	GL/PW	2	5,10	5,41	5,25
GL/PH	1	–	–	8,39	GL/PH	1	–	–	8,07
GL/CD	1	–	–	13,38	GL/CD	1	–	–	11,90
GL/CW	1	–	–	11,79	GL/CW	2	12,21	12,89	12,55
PW/PH	1	–	–	1,47	PW/PH	1	–	–	1,49
DW/DH	1	–	–	1,24	DW/DH	1	–	–	1,18

Table 50

*Falco tinnunculus* – Femur*Falco vespertinus* – Femur

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/ML	21	1,02	1,04	1,03	GL/ML	11	1,02	1,04	1,03
GL/PW	21	5,60	6,31	5,89	GL/PW	11	5,64	6,16	5,93
GL/PH	21	7,51	8,69	8,11	GL/PH	11	7,29	8,49	7,92
GL/CD	21	11,66	13,84	12,66	GL/CD	11	12,57	13,73	13,16
GL/CW	21	11,73	13,75	12,59	GL/CW	11	11,81	13,54	12,56
PW/PH	21	1,29	1,50	1,38	PW/PH	11	1,24	1,41	1,38
DW/DH	21	1,17	1,34	1,25	DW/DH	11	1,16	1,25	1,20

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/ML	26	1,02	1,04	1,03	GL/ML	14	1,03	1,05	1,04
GL/PW	26	5,43	6,33	5,79	GL/PW	14	5,45	6,05	5,76
GL/PH	26	7,34	8,19	7,84	GL/PH	14	7,09	8,64	7,75
GL/CD	26	11,55	13,82	12,34	GL/CD	14	11,75	13,18	12,67
GL/CW	26	10,74	14,25	12,37	GL/CW	14	11,56	13,48	12,26
PW/PH	26	1,27	1,44	1,35	PW/PH	14	1,25	1,57	1,35
DW/DH	26	1,19	1,34	1,26	DW/DH	14	1,07	1,29	1,19

?	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
GL/ML	14	1,03	1,04	1,03	GL/ML	7	1,03	1,05	1,04
GL/PW	14	5,65	6,09	5,82	GL/PW	7	5,88	6,32	6,09
GL/PH	14	7,32	8,41	7,98	GL/PH	7	7,67	8,58	8,04
GL/CD	14	11,89	13,26	12,31	GL/CD	7	11,77	14,00	13,21
GL/CW	14	11,58	13,76	12,30	GL/CW	7	12,57	13,50	12,86
PW/PH	15	1,25	1,46	1,37	PW/PH	7	1,24	1,40	1,32
DW/DH	15	1,21	1,36	1,26	DW/DH	7	1,13	1,24	1,19

*Falco naumanni* – Femur

♂	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/ML	3	1,03	1,04	1,03	GL/ML	1	–	–	1,04
GL/PW	3	5,43	6,02	5,72	GL/PW	1	–	–	5,80
GL/PH	2	7,28	7,64	7,46	GL/PH	1	–	–	7,69
GL/CD	3	11,40	12,65	12,06	GL/CD	1	–	–	12,64
GL/CW	3	11,74	13,15	12,37	GL/CW	1	–	–	11,80
PW/PH	2	1,27	1,34	1,30	PW/PH	2	1,33	1,34	1,33
DW/DH	3	1,15	1,32	1,24	DW/DH	1	–	–	1,26

Table 51

*Falco subbuteo* – Tibiotarsus*Falco columbarius* – Tibiotarsus

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/PT	10	6,25	6,95	6,63	GL/PT	15	6,24	6,92	6,72
GL/CW	10	18,33	20,39	19,04	GL/CW	15	18,62	21,60	20,00
GL/CT	10	19,65	22,08	20,59	GL/CT	15	19,89	24,54	22,98
PT/DH	10	1,58	1,79	1,65	PT/DH	15	1,58	1,69	1,63
CW/CT	11	1,03	1,12	1,08	CW/CT	15	1,00	1,14	1,07
DW/DH	11	1,28	1,47	1,33	DW/DH	16	1,23	1,36	1,30

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PT	6	6,37	6,73	6,54	GL/PT	20	6,30	7,00	6,71
GL/CW	6	16,19	19,30	17,87	GL/CW	19	18,58	22,08	19,75
GL/CT	6	19,03	21,44	20,38	GL/CT	20	19,79	23,92	21,62
PT/DH	6	1,58	1,79	1,66	PT/DH	20	1,52	1,71	1,62
CW/CT	6	1,11	1,19	1,14	CW/CT	19	1,03	1,16	1,09
DW/DH	6	1,33	1,40	1,36	DW/DH	20	1,25	1,39	1,32

?	n	min.	max.	$\bar{x}$
GL/PT	2	6,62	6,75	6,68
GL/CW	2	19,86	20,00	19,93
GL/CT	2	22,15	22,40	22,27
PT/DH	2	1,67	1,69	1,68
CW/CT	2	1,12	1,12	1,12
DW/DH	2	1,31	1,33	1,32

*Falco eleonora* – Tibiotarsus

?	n	min.	max.	$\bar{x}$
GL/PT	1	–	–	6,47
GL/CW	1	–	–	18,11
GL/CT	1	–	–	19,81
PT/DH	–	–	–	–
CW/CT	1	–	–	1,09
DW/DH	–	–	–	–

Table 51

*Falco tinnunculus – Tibiotarsus**Falco vespertinus – Tibiotarsus*

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/PT	13	6,55	7,52	7,07	GL/PT	9	6,27	7,15	6,75
GL/CW	13	17,97	21,21	19,35	GL/CW	9	18,00	20,71	19,02
GL/CT	13	19,17	24,75	22,59	GL/CT	9	19,52	23,25	20,89
PT/DH	13	1,45	1,70	1,56	PT/DH	9	1,54	1,67	1,60
CW/CT	13	1,07	1,25	1,17	CW/CT	9	1,04	1,15	1,10
DW/DH	13	1,13	1,35	1,26	DW/DH	9	1,24	1,33	1,29

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PT	25	6,36	7,47	6,89	GL/PT	14	6,22	6,93	6,54
GL/CW	25	17,38	20,23	18,73	GL/CW	14	16,65	20,08	18,14
GL/CT	25	21,03	24,64	22,57	GL/CT	14	17,25	21,91	19,96
PT/DH	25	1,47	1,68	1,56	PT/DH	14	1,50	1,67	1,60
CW/CT	25	1,10	1,36	1,20	CW/CT	14	1,04	1,22	1,10
DW/DH	25	1,18	1,33	1,26	DW/DH	14	1,20	1,36	1,28

?	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
GL/PT	14	6,63	7,39	6,89	GL/PT	7	6,31	7,06	6,75
GL/CW	14	17,48	21,11	18,74	GL/CW	7	18,15	20,04	18,95
GL/CT	14	20,34	26,86	22,64	GL/CT	7	19,72	22,77	21,63
PT/DH	14	1,48	1,62	1,56	PT/DH	7	1,48	1,67	1,60
CW/CT	14	1,11	1,32	1,21	CW/CT	8	1,04	1,19	1,14
DW/DH	14	1,18	1,33	1,27	DW/DH	8	1,20	1,35	1,26

*Falco naumanni – Tibiotarsus*

♂	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PT	2	6,86	7,46	7,16	GL/PT	1	–	–	6,68
GL/CW	2	17,69	20,00	18,84	GL/CW	1	–	–	15,80
GL/CT	2	19,17	21,74	20,45	GL/CT	1	–	–	18,96
PT/DH	1	–	–	1,42	PT/DH	1	–	–	1,45
CW/CT	2	1,08	1,09	1,08	CW/CT	1	–	–	1,20
DW/DH	1	–	–	1,26	DW/DH	1	–	–	1,20

*Falco naumanni – Tibiotarsus*

?	n	min.	max.	$\bar{x}$
GL/PT	1	–	–	7,00
GL/CW	1	–	–	18,31
GL/CT	1	–	–	20,69
PT/DH	1	–	–	1,42
CW/CT	1	–	–	1,13
DW/DH	1	–	–	1,29



Table 52

*Falco subbuteo* – Tarsometatarsus*Falco columbarius* – Tarsometatarsus

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/PW	11	4,58	5,15	4,86	GL/PW	17	5,09	5,76	5,38
GL/HH	11	6,28	7,02	6,81	GL/HH	17	7,06	7,98	7,48
GL/CW	11	12,96	14,12	13,43	GL/CW	17	13,37	16,39	14,82
GL/DW	11	4,91	5,57	5,23	GL/DW	17	5,32	6,15	5,79
PW/CW	11	2,60	3,00	2,77	PW/CW	17	2,52	3,00	2,75
PW/DW	11	0,98	1,16	1,08	PW/DW	17	1,01	1,13	1,08

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	7	4,31	5,07	4,60	GL/PW	20	4,88	5,50	5,14
GL/HH	7	6,26	7,10	6,81	GL/HH	20	6,94	7,59	7,25
GL/CW	7	12,10	13,65	12,75	GL/CW	20	13,07	15,50	14,13
GL/DW	7	4,74	5,55	5,00	GL/DW	20	5,15	5,82	5,48
PW/CW	7	2,68	2,89	2,77	PW/CW	20	2,59	2,96	2,75
PW/DW	7	1,05	1,12	1,08	PW/DW	20	1,01	1,12	1,07

?	n	min.	max.	$\bar{x}$
GL/PW	2	5,10	5,21	5,15
GL/HH	2	7,20	7,45	7,32
GL/CW	2	14,68	15,21	14,94
GL/DW	2	5,32	5,98	5,65
PW/CW	2	2,88	2,92	2,90
PW/DW	2	1,04	1,15	1,09

*Falco tinnunculus* – Tarsometatarsus*Falco vespertinus* – Tarsometatarsus

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/PW	13	5,21	6,23	5,60	GL/PW	10	4,42	5,18	4,79
GL/HH	13	7,21	8,57	7,84	GL/HH	10	6,17	6,75	6,47
GL/CW	13	12,56	15,81	13,67	GL/CW	10	10,70	13,95	12,27
GL/DW	13	5,51	6,26	5,85	GL/DW	10	4,62	5,30	4,95
PW/CW	13	2,32	2,54	2,44	PW/CW	10	2,26	2,82	2,56
PW/DW	13	0,99	1,11	1,05	PW/DW	10	0,98	1,09	1,03

Table 52

*Falco tinnunculus – Tarsometatarsus**Falco vespertinus – Tarsometatarsus*

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	23	5,17	6,03	5,42	GL/PW	13	4,42	5,07	4,73
GL/HH	23	7,14	8,37	7,71	GL/HH	13	5,70	6,77	6,38
GL/CW	23	12,30	14,64	13,16	GL/CW	13	10,55	12,83	11,92
GL/DW	23	5,17	6,22	5,68	GL/DW	13	4,60	4,97	4,75
PW/CW	24	2,24	2,76	2,43	PW/CW	14	2,33	2,67	2,51
PW/DW	23	1,00	1,13	1,05	PW/DW	14	0,93	1,08	1,00

?	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
GL/PW	13	5,05	6,07	5,45	GL/PW	7	4,78	5,22	5,02
GL/HH	13	7,37	8,29	7,83	GL/HH	7	6,24	7,05	6,61
GL/CW	13	11,84	15,07	13,14	GL/CW	7	11,76	13,77	12,71
GL/DW	13	5,44	6,56	5,78	GL/DW	7	5,05	5,35	5,19
PW/CW	13	2,22	2,74	2,41	PW/CW	7	2,32	2,70	2,53
PW/DW	13	1,01	1,14	1,06	PW/DW	7	0,97	1,09	1,03

*Falco naumanni – Tarsometatarsus*

♂	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	2	4,84	5,06	4,95	GL/PW	1	–	–	4,90
GL/HH	1	–	–	7,20	GL/HH	1	–	–	6,76
GL/CW	2	12,71	12,96	12,83	GL/CW	1	–	–	11,69
GL/DW	2	5,45	5,68	5,56	GL/DW	1	–	–	5,33
PW/CW	2	2,56	2,62	2,59	PW/CW	1	–	–	2,38
PW/DW	2	1,12	1,12	1,12	PW/DW	1	–	–	1,09

?	n	min.	max.	$\bar{x}$
GL/PW	1	–	–	5,00
GL/HH	1	–	–	6,25
GL/CW	1	–	–	13,64
GL/DW	1	–	–	5,66
PW/CW	1	–	–	2,73
PW/DW	1	–	–	1,13

*Falco subbuteo* –  
Phalanx I digiti I posterior

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/PW	7	3,09	3,45	3,34	GL/PW	15	3,12	3,59	3,41
GL/CW	7	5,55	6,00	5,78	GL/CW	15	5,53	6,93	6,05
PW/DW	7	1,30	1,57	1,46	PW/DW	15	1,33	1,65	1,42

*Falco columbarius* –  
Phalanx I digiti I posterior

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	5	2,97	3,41	3,20	GL/PW	20	3,23	3,54	3,36
GL/CW	5	5,30	6,17	5,69	GL/CW	20	5,40	6,50	5,87
PW/DW	5	1,39	1,46	1,42	PW/DW	20	1,32	1,57	1,42

?	n	min.	max.	$\bar{x}$
GL/PW	2	3,25	3,50	3,37
GL/CW	2	5,78	6,12	5,95
PW/DW	2	1,33	1,52	1,42

*Falco tinnunculus* –  
Phalanx I digiti I posterior

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/PW	12	2,86	3,35	3,05	GL/PW	7	2,75	3,18	3,00
GL/CW	12	4,64	5,50	5,07	GL/CW	7	4,53	5,25	4,96
PW/DW	12	1,39	1,62	1,51	PW/DW	7	1,35	1,55	1,42

*Falco vespertinus* –  
Phalanx I digiti I posterior

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	22	2,74	3,12	2,93	GL/PW	10	2,79	3,03	2,94
GL/CW	22	4,65	5,50	4,95	GL/CW	10	4,58	5,25	4,93
PW/DW	22	1,37	1,73	1,56	PW/DW	10	1,43	1,55	1,46

?	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
GL/PW	13	2,62	3,31	2,95	GL/PW	6	2,71	3,22	2,96
GL/CW	13	4,35	5,58	4,91	GL/CW	6	4,76	5,67	5,17
PW/DW	13	1,45	1,67	1,55	PW/DW	6	1,35	1,72	1,50

*Falco naumanni* – Phalanx I digiti I posterior

♂	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	1	–	–	2,90	GL/PW	1	–	–	2,90
GL/CW	1	–	–	5,25	GL/CW	1	–	–	4,67
PW/DW	1	–	–	1,45	PW/DW	1	–	–	1,26

?	n	min.	max.	$\bar{x}$
GL/PW	1	–	–	2,81
GL/CW	1	–	–	5,07
PW/DW	1	–	–	1,59

Table 54

*Falco subbuteo* –  
Phalanx 2 digiti 1 posterior

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/PH	6	1,86	2,02	1,97	GL/PH	14	2,02	2,27	2,15
PH/PW	6	2,10	2,28	2,20	PH/PW	15	2,00	2,53	2,29

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PH	5	1,92	2,02	1,97	GL/PH	20	2,00	2,19	2,07
PH/PW	5	2,17	2,53	2,32	PH/PW	20	2,13	2,50	2,29

?	n	min.	max.	$\bar{x}$
GL/PH	2	2,00	2,07	2,03
PH/PW	2	2,37	2,50	2,43

*Falco tinnunculus* –  
Phalanx 2 digiti 1 posterior

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/PH	12	1,96	2,20	2,10	GL/PH	6	1,87	2,00	1,93
PH/PW	12	1,88	2,27	2,05	PH/PW	6	2,00	2,29	2,13

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PH	20	1,94	2,15	2,05	GL/PH	11	1,83	2,12	1,94
PH/PW	20	1,88	2,26	2,06	PH/PW	11	2,00	2,29	2,10

?	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
GL/PH	12	2,00	2,14	2,06	GL/PH	7	1,76	1,97	1,90
PH/PW	13	1,85	2,45	2,01	PH/PW	7	2,00	2,56	2,21

*Falco naumanni* – Phalanx 2 digiti 1 posterior

♂	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PH	1	–	–	1,97	GL/PH	1	–	–	1,97
PH/PW	1	–	–	2,10	PH/PW	1	–	–	2,28

?	n	min.	max.	$\bar{x}$
GL/PH	–	–	–	–
PH/PW	1	–	–	2,17

*Falco subbuteo* –  
Phalanx 1 dititi 2 posterior

*Falco columbarius* –  
Phalanx 1 dititi 2 posterior

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/PW	6	2,18	2,53	2,36	GL/PW	15	2,23	2,50	2,37
GL/CW	6	4,31	5,07	4,58	GL/CW	15	3,88	4,37	4,10
PW/DW	6	1,32	1,36	1,34	PW/DW	15	1,12	1,26	1,22

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	5	2,30	3,03	2,52	GL/PW	20	2,18	2,52	2,32
GL/CW	5	4,00	6,27	4,79	GL/CW	20	3,60	4,39	3,93
PW/DW	5	1,22	1,35	1,29	PW/DW	20	1,11	1,35	1,22

?	n	min.	max.	$\bar{x}$
GL/PW	2	2,31	2,31	2,31
GL/CW	2	3,72	4,11	3,91
PW/DW	2	1,23	1,26	1,24

*Falco tinnunculus* –  
Phalanx 1 dititi 2 posterior

*Falco vespertinus* –  
Phalanx 1 dititi 2 posterior

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/PW	12	1,78	2,13	1,97	GL/PW	9	2,07	2,50	2,20
GL/CW	12	3,00	3,50	3,21	GL/CW	9	3,37	4,57	3,95
PW/DW	12	1,15	1,27	1,22	PW/DW	9	1,20	1,37	1,27

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	20	1,67	2,06	1,91	GL/PW	9	2,11	2,33	2,21
GL/CW	20	2,58	3,55	3,12	GL/CW	9	3,66	4,78	4,11
PW/DW	20	1,10	1,37	1,25	PW/DW	9	1,14	1,32	1,27

?	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
GL/PW	14	1,77	2,10	1,93	GL/PW	6	2,08	2,31	2,21
GL/CW	14	2,69	3,38	3,11	GL/CW	6	3,60	4,69	4,09
PW/DW	14	1,18	1,33	1,26	PW/DW	6	1,24	1,37	1,32

*Falco naumanni* – Phalanx 1 diti 2 posterior

♂	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	1	–	–	1,96	GL/PW	1	–	–	2,35
GL/CW	1	–	–	3,80	GL/CW	1	–	–	3,59
PW/DW	1	–	–	1,32	PW/DW	1	–	–	1,18

Table 56

*Falco subbuteo* –  
*Phalanx 2 digiti 2 posterior*

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/PW	7	4,16	4,69	4,33	GL/PW	15	3,80	4,35	4,09
GL/CW	7	6,12	6,75	6,51	GL/CW	15	5,76	6,60	6,11
PW/CW	7	1,44	1,56	1,50	PW/CW	15	1,37	1,56	1,49

*Falco columbarius* –  
*Phalanx 2 digiti 2 posterior*

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	5	4,07	4,38	4,24	GL/PW	20	3,74	4,40	4,04
GL/CW	5	6,16	7,12	6,69	GL/CW	20	5,31	6,55	6,00
PW/CW	5	1,47	1,62	1,57	PW/CW	20	1,42	1,56	1,48

?	n	min.	max.	$\bar{x}$
GL/PW	2	3,92	4,00	3,96
GL/CW	2	6,23	6,25	6,24
PW/CW	2	1,56	1,59	1,57

*Falco tinnunculus* –  
*Phalanx 2 digiti 2 posterior*

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/PW	13	3,71	4,23	3,95	GL/PW	8	3,61	4,19	3,93
GL/CW	13	5,05	5,89	5,44	GL/CW	8	4,88	6,28	5,60
PW/CW	13	1,29	1,55	1,38	PW/CW	8	1,29	1,57	1,42

*Falco vespertinus* –  
*Phalanx 2 digiti 2 posterior*

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	21	3,59	4,11	3,88	GL/PW	10	3,56	4,14	3,84
GL/CW	21	5,00	5,75	5,36	GL/CW	10	5,35	6,21	5,75
PW/CW	21	1,29	1,50	1,38	PW/CW	10	1,41	1,57	1,50

?	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
GL/PW	14	3,42	4,12	3,86	GL/PW	6	3,91	4,30	4,03
GL/CW	14	4,95	6,05	5,32	GL/CW	6	5,60	6,69	6,08
PW/CW	14	1,27	1,55	1,38	PW/CW	6	1,40	1,69	1,51



*Falco naumanni* – Phalanx 2 digiti 2 posterior

♂	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	1	–	–	3,74	GL/PW	1	–	–	3,74
GL/CW	1	–	–	6,14	GL/CW	1	–	–	5,37
PW/CW	1	–	–	1,64	PW/CW	1	–	–	1,44

Table 57

*Falco subbuteo* –  
Phalanx 3 digiti 2 posterior

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/PH	6	1,98	2,16	2,06	GL/PH	14	2,14	2,39	2,24
PH/PW	6	2,10	2,26	2,18	PH/PW	15	1,91	2,33	2,10

*Falco columbarius* –  
Phalanx 3 digiti 2 posterior

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PH	5	2,04	2,17	2,09	GL/PH	20	2,08	2,40	2,20
PH/PW	5	2,17	2,45	2,26	PH/PW	20	1,96	2,30	2,11

?	n	min.	max.	$\bar{x}$
GL/PH	2	2,15	2,21	2,18
PH/PW	2	2,19	2,21	2,20

*Falco tinnunculus* –  
Phalanx 3 digiti 2 posterior

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/PH	12	2,08	2,38	2,23	GL/PH	7	2,00	2,28	2,11
PH/PW	12	1,72	2,14	1,90	PH/PW	7	1,89	2,33	2,08

*Falco vespertinus* –  
Phalanx 3 digiti 2 posterior

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PH	18	2,02	2,28	2,15	GL/PH	7	2,02	2,19	2,09
PH/PW	18	1,78	2,08	1,95	PH/PW	7	1,89	2,12	2,02

?	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
GL/PH	14	2,08	2,29	2,17	GL/PH	6	2,03	2,22	2,10
PH/PW	14	1,71	2,26	1,90	PH/PW	6	2,00	2,37	2,14

*Falco naumanni* – Phalanx 3 digiti 2 posterior

♂	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PH	1	–	–	2,11	GL/PH	1	–	–	2,22
PH/PW	1	–	–	1,89	PH/PW	1	–	–	2,00

*Falco subbuteo* –  
Phalanx 1 digiti 3 posterior

♂	n	min.	max.	$\bar{x}$
GL/PW	7	3,48	4,07	3,85
GL/CW	7	7,56	8,40	8,04
PW/DW	7	1,35	1,52	1,45

*Falco columbarius* –  
Phalanx 1 digiti 3 posterior

♂	n	min.	max.	$\bar{x}$
GL/PW	15	3,33	3,73	3,56
GL/CW	15	6,65	7,87	7,32
PW/DW	15	1,35	1,60	1,44

♀	n	min.	max.	$\bar{x}$
GL/PW	5	3,42	4,03	3,66
GL/CW	5	7,23	8,67	8,07
PW/DW	5	1,44	1,59	1,48

♀	n	min.	max.	$\bar{x}$
GL/PW	19	3,25	3,71	3,48
GL/CW	19	6,67	8,14	7,30
PW/DW	20	1,35	1,64	1,44

?	n	min.	max.	$\bar{x}$
GL/PW	2	3,57	3,64	3,60
GL/CW	2	7,37	7,53	7,45
PW/DW	2	1,43	1,48	1,45

*Falco tinnunculus* –  
Phalanx 1 digiti 3 posterior

♂	n	min.	max.	$\bar{x}$
GL/PW	14	2,84	3,29	3,05
GL/CW	14	5,76	6,73	6,24
PW/DW	14	1,48	1,71	1,56

*Falco vespertinus* –  
Phalanx 1 digiti 3 posterior

♂	n	min.	max.	$\bar{x}$
GL/PW	8	2,87	3,30	3,11
GL/CW	8	6,14	7,38	6,63
PW/DW	8	1,35	1,55	1,46

♀	n	min.	max.	$\bar{x}$
GL/PW	20	2,73	3,24	2,99
GL/CW	20	5,61	6,81	6,15
PW/DW	20	1,46	1,76	1,53

♀	n	min.	max.	$\bar{x}$
GL/PW	10	3,00	3,33	3,09
GL/CW	10	6,00	7,25	6,58
PW/DW	10	1,39	1,58	1,49

?	n	min.	max.	$\bar{x}$
GL/PW	13	2,94	3,22	3,05
GL/CW	13	5,53	7,36	6,25
PW/DW	13	1,42	1,70	1,55

?	n	min.	max.	$\bar{x}$
GL/PW	7	2,83	3,44	3,19
GL/CW	7	5,86	8,00	7,01
PW/DW	7	1,40	1,61	1,49

*Falco naumanni* – Phalanx 1 digiti 3 posterior

♂	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	1	–	–	2,76	GL/PW	1	–	–	3,03
GL/CW	1	–	–	7,23	GL/CW	1	–	–	6,28
PW/DW	1	–	–	1,62	PW/DW	1	–	–	1,38

?	n	min.	max.	$\bar{x}$
GL/PW	1	–	–	2,79
GL/CW	1	–	–	6,23
PW/DW	1	–	–	1,61

*Falco subbuteo* –  
Phalanx 2 digiti 3 posterior

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/CW	7	6,64	7,31	7,02	GL/CW	13	5,67	6,61	6,08

*Falco columbarius* –  
Phalanx 2 digiti 3 posterior

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/CW	5	6,87	7,14	6,98	GL/CW	19	5,23	6,77	5,76

?	n	min.	max.	$\bar{x}$
GL/CW	2	6,07	6,33	6,20

*Falco tinnunculus* –  
Phalanx 2. digiti 3. posterior

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/CW	11	3,76	4,60	4,21	GL/CW	7	3,93	5,42	4,52

*Falco vespertinus* –  
Phalanx 2. digiti 3. posterior

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/CW	19	3,94	4,67	4,28	GL/CW	10	4,00	5,28	4,56

?	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
GL/CW	13	3,56	5,23	4,33	GL/CW	7	4,00	5,50	4,86

*Falco naumanni* – Phalanx 2. digiti 3 posterior

♂	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/CW	1	–	–	4,08	GL/CW	1	–	–	3,93

?	n	min.	max.	$\bar{x}$
GL/CW	2	–	–	3,92

Table 60

*Falco subbuteo* –  
Phalanx 3 digiti 3 posterior

*Falco columbarius* –  
Phalanx 3 digiti 3 posterior

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/CW	7	5,75	6,53	6,12	GL/CW	13	5,56	6,57	6,07
PW/CW	7	1,31	1,47	1,36	PW/CW	13	1,21	1,33	1,29
PW/DW	7	1,11	1,23	1,19	PW/DW	13	1,11	1,25	1,15

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/CW	5	5,83	6,56	6,18	GL/CW	19	5,31	6,50	5,86
PW/CW	5	1,37	1,50	1,41	PW/CW	19	1,21	1,43	1,31
PW/DW	5	1,14	1,25	1,20	PW/DW	19	1,09	1,28	1,16

?	n	min.	max.	$\bar{x}$
GL/CW	2	5,81	5,82	5,81
PW/CW	2	1,25	1,29	1,27
PW/DW	2	1,16	1,18	1,17

*Falco tinnunculus* –  
Phalanx 3 digiti 3 posterior

*Falco vespertinus* –  
Phalanx 3 digiti 3 posterior

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/CW	13	4,55	5,76	5,23	GL/CW	7	4,93	5,77	5,49
PW/CW	13	1,10	1,39	1,22	PW/CW	7	1,33	1,38	1,36
PW/DW	13	1,05	1,17	1,11	PW/DW	7	1,12	1,28	1,22

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/CW	18	4,75	5,50	5,18	GL/CW	10	4,80	5,46	5,28
PW/CW	18	1,15	1,29	1,22	PW/CW	10	1,28	1,46	1,36
PW/DW	18	1,04	1,20	1,12	PW/DW	10	1,18	1,27	1,22

?	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
GL/CW	14	4,80	5,87	5,16	GL/CW	7	5,36	6,00	5,62
PW/CW	14	1,15	1,39	1,23	PW/CW	7	1,21	1,46	1,37
PW/DW	14	1,05	1,26	1,15	PW/DW	7	1,12	1,28	1,22

*Falco numanni* – Phalanx 3 digiti 3 posterior

♂	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/CW	1	–	–	5,69	GL/CW	1	–	–	5,28
PW/CW	1	–	–	1,38	PW/CW	1	–	–	1,28
PW/DW	1	–	–	1,06	PW/DW	1	–	–	1,06

?	n	min.	max.	$\bar{x}$
GL/CW	1	–	–	5,67
PW/CW	1	–	–	1,33
PW/DW	1	–	–	1,07

*Falco subbuteo* –  
Phalanx 4 digiti 3 posterior

*Falco columbarius* –  
Phalanx 4 digiti 3 posterior

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/PH	6	2,12	2,31	2,18	GL/PH	14	2,17	2,39	2,26
PH/PW	6	1,76	2,00	1,93	PH/PW	14	1,73	2,06	1,91

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PH	5	2,07	2,29	2,16	GL/PH	20	2,07	2,30	2,20
PH/PW	5	1,83	2,00	1,91	PH/PW	20	1,71	2,10	1,88

?	n	min.	max.	$\bar{x}$
GL/PH	2	2,21	2,25	2,23
PH/PW	2	1,91	2,00	1,95

*Falco tinnunculus* –  
Phalanx 4 digiti 3 posterior

*Falco verperinus* –  
Phalanx 4 digiti 3 posterior

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/PH	13	2,02	2,40	2,27	GL/PH	7	2,11	2,37	2,22
PH/PW	13	1,59	1,90	1,71	PH/PW	7	1,70	1,94	1,78

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PH	20	2,10	2,34	2,22	GL/PH	8	2,15	2,33	2,25
PH/PW	20	1,55	1,92	1,74	PH/PW	8	1,65	1,94	1,80

?	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
GL/PH	12	2,07	2,35	2,20	GL/PH	7	2,08	2,35	2,21
PH/PW	12	1,58	1,95	1,70	PH/PW	7	1,74	2,06	1,85

*Falco naumanni* – Phalanx 4 digiti 3 posterior

♂	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PH	1	–	–	2,34	GL/PH	1	–	–	2,30
PH/PW	1	–	–	1,60	PH/PW	1	–	–	1,65

?	n	min.	max.	$\bar{x}$
GL/PH	1	–	–	2,13
PH/PW	1	–	–	1,82



*Falco subbuteo* –  
Phalanx I digiti 4 posterior

♂	n	min.	max.	$\bar{x}$
GL/CW	7	2,14	2,65	2,36

*Falco columbarius* –  
Phalanx I digiti 4. posterior

♀	n	min.	max.	$\bar{x}$
GL/CW	4	2,15	2,53	2,32

?	n	min.	max.	$\bar{x}$
GL/CW	2	2,11	2,42	2,26

*Falco tinnunculus* –  
Phalanx I digiti 4 posterior

♂	n	min.	max.	$\bar{x}$
GL/CW	9	1,68	2,10	1,85

*Falco vespertinus* –  
Phalanx I digiti 4 posterior

♀	n	min.	max.	$\bar{x}$
GL/CW	17	1,65	2,10	1,88

?	n	min.	max.	$\bar{x}$
GL/CW	12	1,69	2,22	1,85

*Falco naumanni* – Phalanx I digiti 4 posterior

♂	n	min.	max.	$\bar{x}$
GL/CW	1	–	–	1,94

♀	n	min.	max.	$\bar{x}$
GL/CW	1	–	–	1,79

?	n	min.	max.	$\bar{x}$
GL/CW	1	–	–	1,94

*Falco subbuteo* –  
Phalanx 2 digiti 4 posterior

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/PW	7	1,53	1,68	1,59	GL/PW	15	1,46	1,64	1,55
GL/CW	7	2,11	2,67	2,36	GL/CW	15	1,84	2,25	2,06
GL/DW	7	1,87	2,10	2,01	GL/DW	15	1,73	1,90	1,82
PW/DW	7	1,22	1,30	1,27	PW/DW	15	1,09	1,24	1,17

*Falco columbarius* –  
Phalanx 2 digiti 4 posterior

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	5	1,52	1,63	1,57	GL/PW	19	1,44	1,71	1,53
GL/CW	5	2,10	2,44	2,25	GL/CW	19	1,77	2,28	2,02
GL/DW	5	2,00	2,09	2,04	GL/DW	19	1,60	1,95	1,76
PW/DW	5	1,26	1,35	1,30	PW/DW	19	1,04	1,23	1,15

?	n	min.	max.	$\bar{x}$
GL/PW	2	1,43	1,60	1,51
GL/CW	2	1,83	2,11	1,97
GL/DW	2	1,65	1,74	1,69
PW/DW	2	1,09	1,15	1,12

*Falco tinnunculus* –  
Phalanx 2 digiti 4 posterior

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/PW	11	1,00	1,16	1,08	GL/PW	8	1,21	1,36	1,28
GL/DW	11	1,23	1,41	1,33	GL/DW	8	1,45	1,72	1,57
PW/DW	11	1,14	1,32	1,23	PW/DW	8	1,16	1,28	1,23

*Falco vespertinus* –  
Phalanx 2 digiti 4 posterior

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	18	1,03	1,27	1,13	GL/PW	7	1,12	1,26	1,22
GL/DW	18	1,29	1,46	1,37	GL/DW	7	1,42	1,61	1,47
PW/DW	18	1,13	1,32	1,22	PW/DW	7	1,15	1,28	1,21

?	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
GL/PW	14	1,03	1,30	1,14	GL/PW	4	1,22	1,36	1,28
GL/DW	14	1,25	1,52	1,41	GL/DW	4	1,55	1,67	1,62
PW/DW	14	1,12	1,33	1,24	PW/DW	4	1,22	1,28	1,26

*Falco naumanni* – Phalanx 2 digiti 4 posterior

♂	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/CW	1	–	–	1,14	GL/CW	1	–	–	1,19

?	n	min.	max.	$\bar{x}$
GL/PW	1	–	–	1,09
GL/CW	1	–	–	1,41

Table 64

*Falco subbuteo* –  
Phalanx 3 digiti 4 posterior

*Falco columbarius* –  
Phalanx 3 digiti 4 posterior

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/PW	7	2,40	2,76	2,62	GL/PW	14	2,04	2,40	2,23
GL/CW	7	4,07	4,60	4,30	GL/CW	14	3,27	3,93	3,56

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	5	2,23	2,69	2,49	GL/PW	20	2,00	2,30	2,16
GL/CW	5	3,87	4,69	4,31	GL/CW	20	2,89	4,08	3,47

?	n	min.	max.	$\bar{x}$
GL/PW	2	2,27	2,32	2,29
GL/CW	2	3,57	4,14	3,85

*Falco tinnunculus* –  
Phalanx 3 digiti 4 posterior

*Falco verpertinus* –  
Phalanx 3 digiti 4 posterior

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/PW	11	1,33	1,54	1,45	GL/PW	7	1,50	1,76	1,66
GL/CW	11	1,84	2,17	1,96	GL/CW	7	2,06	2,69	2,37

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	16	1,32	1,60	1,48	GL/PW	8	1,54	1,80	1,63
GL/CW	16	1,80	2,31	2,02	GL/CW	8	2,18	2,77	2,39

?	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
GL/PW	13	1,38	1,62	1,51	GL/PW	6	1,56	1,85	1,69
GL/CW	13	1,80	2,31	2,04	GL/CW	6	2,40	2,85	2,55

*Falco naumanni* – Phalanx 3 digiti 4 posterior

♂	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	1	–	–	1,41	GL/PW	1	–	–	1,70
GL/CW	1	–	–	2,07	GL/CW	1	–	–	2,27

?	n	min.	max.	$\bar{x}$
GL/PW	1	–	–	1,55
GL/CW	1	–	–	2,21

*Falco subbuteo* –  
Phalanx 4 digiti 4 posterior

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/PW	7	4,09	4,94	4,45	GL/PW	13	4,37	5,19	4,67
GL/CW	7	6,00	6,85	6,34	GL/CW	14	5,73	6,92	6,29

*Falco columbarius* –  
Phalanx 4 digiti 4 posterior

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	5	4,22	4,68	4,50	GL/PW	20	4,04	4,75	4,57
GL/CW	5	5,82	6,47	6,28	GL/CW	20	5,62	6,93	6,12

?	n	min.	max.	$\bar{x}$
GL/PW	2	4,58	4,60	4,59
GL/CW	2	6,13	6,21	6,17

*Falco tinnunculus* –  
Phalanx 4 digiti 4 posterior

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/PW	11	3,61	4,35	4,00	GL/PW	7	3,72	4,05	3,87
GL/CW	11	4,63	5,93	5,23	GL/CW	7	4,78	6,08	5,36

*Falco vespertinus* –  
Phalanx 4 digiti 4 posterior

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	19	3,62	4,22	3,92	GL/PW	9	3,50	4,12	3,78
GL/CW	19	4,58	5,56	5,15	GL/CW	9	5,00	5,69	5,31

?	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
GL/PW	13	3,60	4,40	3,98	GL/PW	7	3,50	4,31	3,92
GL/CW	13	4,70	6,28	5,20	GL/CW	7	5,31	5,92	5,62

*Falco naumanni* – Phalanx 4 digiti 4 posterior

♂	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PW	1	–	–	3,78	GL/PW	1	–	–	4,06
GL/CW	1	–	–	5,23	GL/CW	1	–	–	5,31

?	n	min.	max.	$\bar{x}$
GL/PW	1	–	–	3,65
GL/CW	1	–	–	5,17

*Falco subbuteo* –  
Phalanx 5 digiti 4 posterior

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/PH	5	2,00	2,08	2,04	GL/PH	14	2,00	2,17	2,10
PH/PW	6	2,00	2,29	2,14	PH/PW	14	1,85	2,23	2,11

*Falco columbarius* –  
Phalanx 5 digiti 4 posterior

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PH	4	1,91	2,12	2,00	GL/PH	20	1,95	2,34	2,08
PH/PW	4	2,15	2,50	2,35	PH/PW	20	2,00	2,28	2,11

?	n	min.	max.	$\bar{x}$
GL/PH	2	2,00	2,10	2,05
PH/PW	2	2,16	2,23	2,19

*Falco tinnunculus* –  
Phalanx 5 digiti 4 posterior

♂	n	min.	max.	$\bar{x}$	♂	n	min.	max.	$\bar{x}$
GL/PH	12	1,93	2,22	2,09	GL/PH	7	2,00	2,16	2,05
PH/PW	12	1,77	2,17	1,94	PH/PW	7	2,00	2,38	2,16

*Falco vespertinus* –  
Phalanx 5 digiti 4 posterior

♀	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PH	18	1,88	2,17	2,06	GL/PH	8	1,91	2,16	2,04
PH/PW	18	1,86	2,04	1,93	PH/PW	8	1,94	2,27	2,11

?	n	min.	max.	$\bar{x}$	?	n	min.	max.	$\bar{x}$
GL/PH	13	1,91	2,15	2,05	GL/PH	5	1,94	2,09	2,03
PH/PW	13	1,76	2,47	1,96	PH/PW	5	2,06	2,43	2,20

*Falco naumanni* – Phalanx 5 digiti 4 posterior

♂	n	min.	max.	$\bar{x}$	♀	n	min.	max.	$\bar{x}$
GL/PH	1	–	–	2,09	GL/PH	1	–	–	2,41
PH/PW	1	–	–	2,06	PH/PW	1	–	–	2,07

?	n	min.	max.	$\bar{x}$
GL/PH	1	–	–	2,00
PH/PW	1	–	–	2,00