

SIGNIFICANCE OF ADDER — *VIPERA BERUS* (LINNAEUS, 1758) PRESENCE IN VOJVODINA. G. Džukić and J. Purger,* *Institute for Biological Research „Siniša Stanković”, 11060 Belgrade and Institute for Biology, 21000 Novi Sad, Yugoslavia*

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Microtaxonomy and distribution of intraspecific taxons of the species *Vipera berus* still represent an open question. This is reflected in our faunistic field in unprecisely defined taxons within the species and connected to that in insufficient knowledge of the boundaries of individual subspecies and their interrelationships. Different from numerous cases this ignorance could not be related to the absence of a scientific interest or research on this topics, but primarily to the complexity of this matter as well as to the biogeographic complexity of the region. If numerous optional and illegitimate taxons by Reuss (1927, 1930, 1937) which were rejected due to serious shortcomings and classified as synonyms were excluded, large contribution in this field was provided by leading European and our experts (Boetger 1889, Méhely 1893, 1898, Werner 1896, 1930, Schreiber 1912, Karaman 1939, Radovanović 1951, Mertens and Wermuth 1960, Klemmer 1963, Brelj and Džukić 1974, Sochurek 1953, 1981).

Rarity of the species, lack of the information from the field studies and especially the absence of communications with The Institute for Immunology, Zagreb, Yugoslavia, together with the above listed problems led to slow progress of both taxonomic and biogeographical knowledge on the adders in our country. The data on this species are particularly sparse for the eastern part of Pannonian and peripannonian region. The only places mentioned in the literature where *V. berus* was previously found were situated at several localities at Fruška gora mountain (Mirković 1901, Živković 1956, Radovanović 1957, 1964, Prša 1959). On the basis of our own evidence, mountains of Vršac (Široko bilo, May 26, 1985, leg. Dr Branka Božičić, Institute for Biology, Novi Sad) can be referred to as another habitat of the adders, announced earlier in the daily newspapers. Similar situation was found to be with new adder findings in the close surroundings of Obedska bara. The first information on the possible adder presence in this part of the country was provided by ing. Dinko Knežević, ex-custodian of the Forestry and Hunting Museum in Belgrade. Such a possibility was not accepted because of the lack of support by the experts. Only after personal communication of dr Djordje Mirić of the Museum of Natural History in Belgrade, with precisely described localities of *V. berus* situated in common oak forest Matijeveca, Džukić (1986) included this viper into the fauna of Obedska bara. New evidence of the specimen found between the Matijeveca forest and the edges of Obedska bara on April 23, 1988, confirmed that the adder should be included into the composition of this biocenosis. Finally, a specimen of *V. berus* caught on May 21, 1988, in the surrounding of Grabovci village at Široka bara locality was generous gift of Mr. R. Silaški from Belgrade.

Specimens of the adders from Obedska bara and neighbourhood of Grabovci village belong to the subspecies *V. b. bosniensis* supporting conception of Mertens and Wermuth (1960) who recommended to classify numerous intraspecific taxons, including *V. b. pseudaspis*, as the synonyms for the Bosnian adder in spite of several basic omissions during the primary diagnosis of the subspecies *bosniensis*. New data confirmed again that there is no need to separate *V. b. pseudaspis* into special taxon or to describe a new subspecies. This resulted in classification of the past findings of *V. b. pseudaspis* (Schreiber 1912, Karaman 1921, Reuss 1927, 1937, Sochurek 1981) into the range of the Bosnian adder, what significantly extended its range to the North and North-West. On the other hand, new findings add more information on the knowledge of the distribution of *V. b. bosniensis* pointing out to the closer connections between the finds in Slavonija, Baranja, Fruška gora, lowland Srem and Posavina and those in peripannonian and mountain regions. Based on the indication of the connection of the *V. berus* populations in south-east Banat with the populations of the nominant subspecies in Carpathian massif it seems justified to support the opinion of Fuhn (Fuhn and Vancea 1961, Vancea et al. 1982) concerning probability of the presence of *V. b. bosniensis* in Roumania.

New data determined in more details the distribution of *V. berus* in the least known part of the range provided a basis for more real understanding of the possible connections between at present isolated regions. The understanding of spatial and systematic relations of intraspecific taxons *V. b. berus* and *V. b. bosniensis* is directly connected to aforementioned facts. It was shown that subspecies *V. b. bosniensis* has larger range than scientifically verified, comprising larger regions of Slavonija and Vojvodina, reducing the range of nominant subspecies only to North-western parts of Yugoslavia. Small exclave of *V. berus berus* et the Vršac mountains is connected with the compact part of this subspecies range in Roumania.

References: Boteger, O. (1889). *Mitt. naturwiss. Ver. Steirmark*, 1888, 270—273. — Bolkay, S., Čurčić, V. (1920). *Glasn. Zem. muz BiH*, 32, 155—204. — Breljih, S., Džukić, G. (1974). *Catalogus Faunae Jugoslaviae*. 4/2 Reptilia. Acad. Sci. et Art. Slovenica, Ljubljana. — Džukić, G. (1986). *Prirodne karakteristike područja Obedske bare*. Elaborat Pokr. zav. zašt. prir., Novi Sad. — Fuhn, I., Stugren, B. (1961). *Fauna RP Romine*. Reptilia 14/2, Acad. Rep. Pop. Romine, Bucuresti. — Karaman, S. (1921). *Glasn. Hrv. prir. društva*, 33, 2, 194—209. — Karaman, S. (1939). *Ann. Mus. Serb. Merid.*, 1, 1, 1—20. — Klemmer, K. (1963). *Liste der rezenten Giftschlagen*. N. G. Elwert Univ.-Verlag, Marburg/Lahn. — Méhely, L. (1893). *Zool. Anz.*, 16, 420, 186—192. — Méhely, L. (1898). *Zool. Anz.*, 20, 544, 434—438. — Mertens, R., Wermuth, H. (1960). *Die Amphibien und Reptilien Europas* Waldemar Kramer, Frankfurt am Main. — Mirković, S. (1901). *Liečnički viestnik*, 23, 7, 246—248. — Radovanović, M. (1951). *Vodozemci i gmizavci naše zemlje*. Naučna knjiga, Beograd. — Radovanović, M. (1957). *Zool. Anz.*, 159, 5/6, 130—137. — Radovanović, M. (1964). *Senck. biol.*, 45, 3/5, 553—561. — Reuss, T. (1927). *Zool. Anz.*, 71, 215—223. — Reuss (1930). *Glasnik Zem. muz., BiH.*, 42, 1, 57—144. — Reuss, T. (1937). *Congr. internat. Zool. Lisbonne 1935*, 1789—1790. — Schreiber, E. (1912). *Herpetologia Europaea*. Gustav Fischer, Jena. — Sochurek, E. (1953). *Carinthia* 2, 143, 2, 103—104. — Sochurek, E. (1981). *Vereinber. Inform. Progr.*, 1981, 3—5. — Vancea, S., Fuhn, J. and Borcea, M. (1982). *Vertebr. Hungar.*, 21, 245—250. — Werner, F. (1897). *Die Reptilen und Amphibien Oesterreich-Ungarn und der Occupationsländer*. A. Pichler's Witve & Sohn, Wien. — Werner, F. (1930). *Zool. Anz.*, 88, 1/4, 89—92. Živković, S. (1956). *Priroda* 6, 152—153.