

# The subfamily Tenthredininae from Laos (Hymenoptera, Tenthredinidae)

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HARIS, A.: *The subfamily Tenthredininae from Laos (Hymenoptera, Tenthredinidae)*.

**Abstract:** 27 species are reported from Laos. *Pachyprotasis fabriziae* spec. nov. and *Macrophya laocoxalis* spec. nov. are described.

**Keywords:** Laos, Hymenoptera, Symphyta, Tenthredinidae, new species

## Introduction

This is the 6th paper on the sawfly-fauna of Laos. In the early 20th century TURNER (1919, 1920), published 2 papers on the former Indochina which included the present territory of Laos, based on the results of the Vitalis de Salvaza expeditions. 87 years later, HARIS and ROLLER (2007) reported 25 sawfly species from the country including 11 new species for the science. In 2013, HARIS (2013) published a study on the Tenthredo Linné, 1758 fauna of Laos. In the recent book, a new paper takes place on the Allantinae, Selandrinae and Heterathrine species. In this paper, further 27 sawfly species are reported.

## Material and methods

The studied material was collected by Dr. C. Holzschuh with the help of local volunteers. It amounts approximately 400 specimens. For the identification of the species, we consulted the comprehensive books of MALAISE 1945, TAKEUCHI 1937 and SAINI 2007 completed with numerous papers as follows: HARIS and ROLLER 1999a,b, 2007, CHEN and WEI 2002, NIE and WEI 1999, SMITH 2012, WEI and ZHONG 2002, ZHONG and WEI 2002, 2010, ZHU and WEI 2002 and many others.

Holotypes are deposited in the Biologiezentrum Linz, Austria.

## List of species

*Beldonea impunctata* Wei, 1996: Louang Phrabang pr., Ban Song Cha env., 1200 m, May 1999, 1 male.

*Colochelyna fulva* R.E. Turner, 1920: Hua Phan Prov., Ban Saleui, Phou Pan Mt., 20°13'30"N, 103°59'26"E, 1350-1900 m, 12-13. 04. 2010, 4 females, 1 male; 09-10. 04. 2010, 3 females, 9 males; 14-18. 04. 2010, 2 females, 1 male; 06. 05. 2010, 1 female; 24. 04. 2010, 1 female; 12. 05. 2010, 2 females; 11. 04. 2010, 1 female, 1 male; 13. 05. 2011, 1 female; 03. 05. 2011, 1 female; 01. 05. 2011, 2 females, 2 males; 11. 05. 2011, 2 females; 06-18. 05. 2004, 1 female; 21. 05. 2011, 1 male; 07. 05. 2011, 4 males; 02-03. 05. 2011, 2 males; 06. 05. 2011, 2 males; 08. 05. 2011, 1 male; 27-28. 04. 2010, 1 male.

*Colochelyna magretti* Konow, 1898: Ban Saleui, Phou Pan Mt., 20°13'30"N, 103°59'26"E, 1350-1900 m, 02-03. 05. 2011, 2 females; Ban Saleui, Phou Pan Mt., 20°13'30"N, 103°59'26"E, 1350-1900 m, 18. 05. 2011, 1 female; Ban Saleui, Phou Pan Mt., 20°13'30"N, 103°59'26"E, 1350-1900 m, 11. 05. 2011, 2 females; Ban Saleui, Phou Pan Mt., 20°13'30"N, 103°59'26"E, 1350-1900 m, 31. 05. 2011, 1 female; Ban Saleui, Phou Pan Mt., 20°13'30"N, 103°59'26"E, 1350-1900 m, 21. 04. 2010, 1 female; Ban Saleui, Phou Pan Mt., 20°13'30"N, 103°59'26"E, 1350-1900 m, 07-09. 04. 2010, 1 female; Ban Saleui, Phou Pan Mt., 20°13'30"N, 103°59'26"E, 1350-1900 m, 27. 05. 2011, 1 female; Ban Saleui, Phou Pan Mt., 20°13'30"N, 103°59'26"E, 1350-1900 m, 06. 05. 2010, 1 female.

*Conaspidia fasciatipennis* R.E. Turner, 1919: Ban Saleui, Phou Pan Mt., 20°13'30"N, 103°59'26"E, 1350-1900 m, 30. 05. 2011, 1 female; 10. 05. 2011, 1 male.

*Macrophya formosana* Rohwer, 1916: Ban Saleui, Phou Pan Mt., 20°13'30"N, 103°59'26"E, 1350-1900 m, 10. 05. 2011, 1 female; 01. 05. 2010, 1 female.

*Macrophya hastulata* Konow, 1898: Ban Saleui, Phou Pan Mt., 20°13'30"N, 103°59'26"E, 1350-1900 m, 30. 04. 2010, 1 male; 28. 05. - 20. 06. 2003, 1 female; 13. 05. 2011, 1 female.

*Macrophya minutifossa* Wei & Nie, 2003: Ban Saleui, Phou Pan Mt., 20°13'30"N, 103°59'26"E, 1350-1900 m, 30. 04. 2010, 1 male; 06. 06. 2009, 1 female; 01. 05. 2011, 1 female; 26. 05. 2011, 1 female.

*Macrophya pilotheca* Wei & Ma, 1997: Ban Saleui, Phou Pan Mt., 20°13'30"N, 103°59'26"E, 1350-1900 m, 10-19. 05. 2009, 1 female; 06. 06. 2009, 2 females; 12. 05. 2011, 1 female; 22. 05. 2011, 1 female.

*Macrophya planata* (Mocsáry, 1909): Ban Saleui, Phou Pan Mt., 20°13'30"N, 103°59'26"E, 1350-1900 m, 20-31. 05. 2009, 1 female; 03-05. 06. 2009, 1 female.

*Macrophya regia* Forsius, 1930: Lao, Hua Phan prov., Ban Saleui, Phou Pan Mt., 20°13'30"N, 103°59'26"E, 1350-1900 m, 07. 05. 2011, 1 female, 1 female, topotypic but 08. 06. 2009; 1 female, 30. 04. 2009; 1 female, 18. 04. 2010; 1 female, 28. 05. 2011; 2 females, 17. 05. 2011; 1 female, 12. 05. 2010; 1 female, 06. 05. 2011; 1 female, 16-08. 05. 2010; 1 female, 10. 05. 2010; 1 male, 06. 05. 2011; 1 male, 21. 04. 2010; 1 male, 17. 05. 2011; 1 male, 22. 04. 2010.

*Macrophya tonkinensis* Malaise, 1945: Ban Saleui, Phou Pan Mt., 20°13'30"N, 103°59'26"E, 1350-1900 m, 25. 05. 2010, 2 females.

*Macrophya verticalis* Konow, 1898: Ban Saleui, Phou Pan Mt., 20°13'30"N, 103°59'26"E, 1350-1900 m, 11. 04. 2010, 1 female; 02-03. 05. 2011, 1 male.

*Neocolochelyna rufidorsata* (Malaise, 1937): Ban Saleui, Phou Pan Mt., 20°13'30"N, 103°59'26"E, 1350-1900 m, 11. 05. 2011, 1 female; 07. 05. 2011, 1 female; 21. 05. 2011, 1 female.

*Pachyprotasis alboannulata* Forsius, 1935: Ban Saleui, Phou Pan Mt., 20°13'30"N, 103°59'26"E, 1350-1900 m, 16. 05. 2011, 1 female; 10. 05. 2011, 1 female.

*Pachyprotasis citrinipicta* Malaise, 1945: Ban Saleui, Phou Pan Mt., 20°13'30"N, 103°59'26"E, 1350-1900 m, 04. 05. 2011, 3 females, 11 males; 25-26. 04. 2010, 1 female; 07. 05. 2011, 2 females, 2 males; 30. 04. 2010, 1 female; 02-03. 05. 2011, 4 females, 2 males; 08. 05. 2011, 1 female, 1 male; 27-28. 04. 2011, 1 female, 1 male; 28-29. 04. 2010, 1 female, 1 male; 22-23. 05. 2010, 1 female; 05. 05. 2011, 2 females, 2 males; 01. 05. 2010, 3 females; 21. 04. 2010, 1 female, 1 male; 25. 05. 2010, 1 female; 16-18. 05. 2010, 1 female; 06. 05. 2011, 3 females, 8 males; 28-29. 04. 2010, 1 female; 10. 05. 2011, 2 females, 4 males; 01. 05. 2011, 1 female; 05. 05. 2010, 1 female; 19. 04. 2010, 1 female; 21. 05. 2011, 1 female; 11. 05. 2011, 3 males; 30. 04. 2010, 1 male; 15. 05. 2011, 1 male; 28. 04. 2010, 1 male; 30. 05. 2011, 1 male; 12. 05. 2011, 1 male; 19. 04. 2010.

*Pachyprotasis flagellaris* Saini and Smith, 2007: Ban Saleui, Phou Pan Mt., 20°13'30"N, 103°59'26"E, 1350-1900 m, 06. 05. 2011, 1 male.

*Pachyprotasis flavipes* (Cameron, 1902): Ban Saleui, Phou Pan Mt., 20°13'30"N, 103°59'26"E, 1350-1900 m, 01. 05. 2010, 1 male.

*Pachyprotasis foveata* M.S. Saini & Vasu, 1998: Ban Saleui, Phou Pan Mt., 20°13'30"N, 103°59'26"E, 1350-1900 m, 11. 05. 2011, 1 female; 30. 04. 2010, 1 female.

*Pachyprotasis multilineata* Malaise, 1945: Ban Saleui, Phou Pan Mt., 20°13'30"N, 103°59'26"E, 1350-1900 m, 12. 05. 2011, 1 female; 13. 05. 2011, 1 female.

*Siobla fulvolobata* Malaise, 1945: Ban Saleui, Phou Pan Mt., 20°13'30"N, 103°59'26"E, 1350-1900 m, 10-19. 05. 2009, 1 female; 14-15. 05. 2010, 1 female; 19. 05. 2011, 1 female; 29. 05. 2011, 1 female; 30. 05. 2011, 1 female; 13. 05. 2010, 4 males; 31. 05. 2011, 1 male; 21. 05. 2011, 1 male; 12. 05. 2010, 2 males; 27. 05. 2011, 1 male; 28. 05. 2011, 1 male; 18. 04. 2010, 1 male; 09. 05. 2010, 1 male; 10-22. 05. 2011, 3 males; 27. 05. 2011, 1 male; 10. 05. 2011, 1 male; 01. 06. 2011, 1 male; Hua Phan pr., Mt Phu Pane, cc. 1500 m, 20°12'N, 103°59'E, 10-22. 05. 2011, 1 female; 01-20. 06. 2011, 1 male.

*Siobla punctata* (Cameron, 1899): Ban Saleui, Phou Pan Mt., 20°13'30"N, 103°59'26"E, 1350-1900 m, 19. 05. 2011, 1 female; Ban Saleui, Phou Pan Mt., 20°13'30"N, 103°59'26"E, 1350-1900 m, 06. 05. 2011, 1 female, 2 males; Ban Saleui, Phou Pan Mt., 20°13'30"N, 103°59'26"E, 1350-1900 m, 08. 05. 2011, 1 male.

*Siobla mooreana* Cameron, 1877: Ban Saleui, Phou Pan Mt., 20°13'30"N, 103°59'26"E, 1350-1900 m, 11. 05. 2011, 1 female; 21. 05. 2011, 1 female, 1 male; 16-18. 05. 2010, 1 male; 10. 05. 2011, 1 male; 27. 05. 2011, 1 male; 08. 05. 2011, 1 male; Phongsaly pr., Phongsaly env., 21°41'N, 102°06'E, cc. 1500 m, June 2003, 1 female; 28. 05.-20. 06. 2003, 1 male.

*Siobla insularis* Malaise, 1945: Ban Saleui, Phou Pan Mt., 20°13'30"N, 103°59'26"E, 1350-1900 m, 19. 04. 2010, 2 males; 14-08. 04. 2010, 1 male; 20. 04. 2010, 1 male; 10. 05. 2010, 2 males; 02-03. 05. 2011, 1 male; 27-28. 04. 2011, 1 male.

*Siobla maxima* R.E. Turner, 1920: Ban Saleui, Phou Pan Mt., 20°13'30"N, 103°59'26"E, 1350-1900 m, 30. 04. 2010, 1 female; 10. 05. 2011, 1 female; 30. 04. 2010, 1 female; 10-22. 05. 2011, 1 female; 27-28. 04. 2011, 1 female; 13. 05. 2011, 1 female; 02-03. 05. 2011, 1 female; 08. 05. 2011, 1 female; 30. 05. 2011, 1 female; 27-28. 04. 2011, 1 female.

*Tenthredo (Propodea) spinosa* Cameron, 1899: Ban Saleui, Phou Pan Mt., 20°13'30"N, 103°59'26"E, 1350-1900 m, 06. 05. 2010, 1 female; 10. 05. 2011, 1 female; 24. 04. 2010, 1 female; 06-18. 05. 2004, 1 female; 16-18. 05. 2010, 1 female; 21. 05. 2010, 1 male; 07-09. 04. 2010, 1 male; 18. 04. 2010, 1 male; 28. 04. 2010, 1 male.

## Descriptions of the new species

*Pachyprotasis fabriziae* spec. nov. (Figs. 1 and 3)

Holotype: male, Lao, Hua Phan prov., Ban Saleui, Phou Pan Mt., 20°13'30"N, 103°59'26"E, 1350-1900 m, 06. 05. 2011, leg. C. Holzschuh and locals.

Male. Head pale straw coloured (green in life), eyes surrounded with narrow white ring (except upper third). Vertex and ocellar area with black spot covering half of frontal area, not reaching eyes and temples. Antenna black, 3-5 antennal segments green below. Labrum blackish green. Mouthparts straw (green) coloured. Thorax straw (green in life); black: wide hind margin of pronotum, triangular central spot of anterior lobe of mesonotum, lateral lobes of mesonotum nearly entirely, except narrow margins, 2 large spots next to mesoscutellum, sunken area behind mesoscutellum, spot behind metascutellum, small spot on metapleuron and small spot on gently elevated part of mesopleuron. Upper third of mesopleuron with triangular white spot. Legs green; black: longitudinal line on fore and middle femora, tibia and tarsi, short apical line on hind femur, hind tibia totally except white wide subapical ring, basal third of hind basitarsus, apices of hind tarsal segments. Abdomen green; black: basal and lateral part of propodeum, tergites 2-5 except hind, central triangular spots, tergites 6-8 with lateral black spots. Wings hyaline, costa, subcosta, stigma brown, lower basal quarter of stigma transparent, venation blackish brown. Head shiny with sporadic, moderately large and shallow punctures. Frontal area with shallow, moderately dense, irregular punctures. Gena very wide, 2,5x wider than diameter of anterior ocellus. Clypeus and labrum extremely elongated. Combined length of labrum and clypeus : length of 3rd antennal segment: 1.0 : 1.0. OOL : POL : OCL: 12 : 5 : 10. Ratios of antennal segments: 10 : 5 : 40 : 45 : 45 : 31 : 25 : 34 : 29. Antenna about as long as whole body. Postocellar carina missing on lateral part of head, slightly but visibly developed behind temples and vertex. Mesonotal lobe minutely, shal-

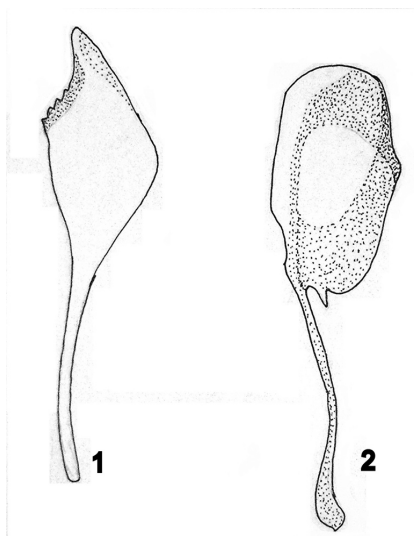


Fig. 1: Penis valve of *Pachyprotasis fabriziae* spec. nov.

Fig. 2: Penis valve of *Macrophya laocoxalis* spec. nov.



Fig. 3: *Pachyprotasis fabriziae* spec. nov. holotype

lowly and densely punctured, moderately shiny. Interspaces between puncture about  $2/3x$  as large as diameter of a puncture. Mesoscutellum, mesoscutellar appendage and metascutellum smooth and shiny. Mesopleuron densely punctured with moderately deep and moderately large punctures, shiny, interspaces between punctures about half as large as diameter of a puncture. Mesoscutellum bluntly elevated with 3 not sharp carina from center to sides. Propodeum smooth and shiny in central part, other tergites and sides of propodeum with moderately sparse, shallow, moderately large punctures, moderately shiny. Claws without basal lobe, apical and subapical teeth subequal. Length of inner hind tibial spur : length of hind basitarsus: 39 : 60. Penis valve in Fig. 1. Length: 9.4 mm.

The new species is dedicated to Dr. Fabricius Turrisi.

In structure of penis valve, the new species related to *Pachyprotasis alboannulata* Forsius, 1935 Fig. Compare Fig. 421 in SAINI 2007. In other points of view like colour, body structure and surface sculpture the 2 species different.

In the keys of MALAISE 1945 and SAINI 2007, the new species runs to *Pachyprotasis pallens* Malaise, 1945. The colour pattern and penis valve of the 2 species are strikingly different compare Figs. 197 and 464 in SAINI 2007 with Figs 1 and 3).

It is also similar to *Pachyprotasis rufigaster* Zhong & Wei, 2010, however, the abdomen is not rufous of the new species. Hind femur and hind tibia are black in the new species. These are pale in *Pachyprotasis rufigaster*, except apical third of abdomen and ring on the apex of hind tibia. Furthermore 3rd antennal segment (flagellomere 1) sig-

nificantly longer than 4th (flagellomere 2); these segments are equal in the new species. The frontal spots of the 2 species are also completely different.

***Macrophya laocoxalis* spec. nov. (Fig. 2)**

Holotype: male, Hua Phan Prov., Ban Saleui, Phou Pan Mt., 20°13'30"N, 103°59'26"E, 1350-1900 m, 27. 05. 2011, leg. C. Holzschuch and locals.

Male: head black; white: clypeus and labrum entirely, basal half of mandible. Antenna entirely black. Thorax and abdomen black only cenchry whitish yellow. Coxae whitish yellow but outside of hind coxa black. All trochanters whitish yellow. Anterior and middle femora and tibiae whitish yellow all with longitudinal black line. Hind femur and tibia black, basal quarter of hind femur whitish yellow. Anterior and middle tarsi brownish yellow, apices of middle tarsal segments black. Hind tarsus black. Wings hyaline, apical part gently brown infumated, stigma, costa, subcosta and venation dark brownish black. Head including frontal area, temples and vertex deeply, densely punctured with large punctures, moderately shiny, temples with large smooth and shiny areas next to postocellar furrows. Postoccipital carina reaching up to 2/3 of eyes. Gena linear. Pentagonal frontal area not indicated. Clypeus shallowly and rectangularly emarginated, clypeal emargination about 0.25x as deep as clypeal median length. Apex of labrum rounded. Head strongly contracted behind eyes. Length and width of postocellar area: 1 : 2. OOL : POL : OCL: 12 : 6 : 10. Antenna about as long as head, thorax and first 2 abdominal segments (propodeum and first tergite) combined. Ratios of antennal segments 1-9: 10 : 5 : 29 : 19 : 19 : 15 : 15 : 15 : 18. Mesonotal lobes deeply, densely and uniformly punctured with large punctures. Interspaces between punctures about half as large as a diameter of a puncture, moderately shiny. Mesoscutellum and mesoscutellar appendage very densely punctured with uniformly deep and large punctures. Basal part of metascutellum smooth and shiny, apical part with dense, large and deep punctures. Mesopleuron densely and deeply punctured with large punctures, shiny, interspaces between punctures about 1-3x as large as diameter of a punctures. Mesoscutellum gently convex, blunt without carina. Metepimeron with oval shaped basin and without appendage. Anal cell of fore wing widely contracted. Abdominal tergites 1-3 smooth and shiny, other tergites with sporadic punctures. Length of hind basitarsus : length of inner hind tibial spur: 44 : 25. Claws without basal lobe, subapical and apical tooth subequal, subapical tooth wider. Penis valve in Fig. 2. Length: 7.6 mm.

According to ZHOU and WEI 2009, the new species belongs to the coxalis group. In the key of ZHOU and WEI 2009 and also in TAKEUCHI 1937, the new species would run to *Macrophya coxalis* Motschulsky, 1866. Differences: penis valve different compare Fig. 2 and Fig. 30 in TAKEUCHI 1937. In *M. coxalis* Takeuchi, hind margin of pronotum and basal half of tegula yellow and legs dominantly black, more yellow colour takes place in the new species.

In the key of SAINI 2007, the new species would run to *Macrophya verticalis* Konow, 1898, however the penis valve of the 2 species are completely different, compare Fig. 514 in SAINI 2007 and Fig. 2.

In MALAISE 1945, the new species runs to *Macrophya formosana* Rohwer, 1916. Shape of penis valve of the 2 species are also completely different (compare Fig. 515 in SAINI 2007 and Fig. 2), also *M. formosana* Rohwer is more richly coloured with yellow.



### *Corrections of mistakes in 2 previous papers*

In HARIS, A. 2013: The genus *Tenthredo* (Linné, 1758) in Laos. - *Natura Somogyiensis* 23: 189-210, the type data of *Tenthredo nigromandali* Haris, 2013 is missing. Hereby, I submit the date and place of capture of the holotype: Holotype: female: Laos, Prov. Hua Phan, Phou Pan Mt., Ban Saleui Village, 20°13'30"N, 103°59'26"E, 1350-1900 m, 02-03. 05. 2011, leg. C. Holzschuh and locals.

In HARIS, A. 2012: Sawflies from China and Indonesia (Hymenoptera: Tenthredinidae) - *Natura Somogyiensis* 22: 111-122, the holotype data of *Pristiphora (Pristiphora) achterbergi* Haris, 2012 published erroneously, the correct holotype data: Holotype, female: S. China, Hunan, nr. Chengbu, Nan Mt. 1300 m, virgin forest trail, near entrance park, 11. 06. 2009, C. v. Achterberg.

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