Entomol. Mitt. zool. Mus. Hamburg	**12** (154): 71-76	Hamburg, 15. Oktober 1996 ISSN 0044-5223

On the taxonomy of the gall-making sawfly *Pontania (Eupontania) proteus* (Benson 1963) comb. n. from the mountains of Southeast Asia (Hymenoptera: Tenthredinidae)

ALEXEI G. ZINOVJEV

(With 9 figures)

Abstract

The female and male paratypes of *Nematus proteus* Benson, 1963 from the mountains of NE Myanmar (NE Burma) were studied; the species is redescribed and placed into the genus *Pontania*, subgenus *Eupontania*. This genus is recorded in the Southeast Asia for the first time. The sawflies belonging to this Holarctic genus produce leaf galls on *Salix*; examining the willow samples in the Herbaria of Harvard University, the galls of various *Pontania* were found on following *Salix* species from South China: *S. fargesii*, *S. magnifica*, *S. ernestii*, *S. dyctioneura* and *S. dunnii*.

Introduction

Nematus proteus (Benson 1963) was described from a few females and a single male collected by R. Malaise at the border of NE Myanmar (NE Burma) and Yunnan (China) at an elevation of about 2000 m. The species was questionably placed in *Nematus*. From other *Nematus*, it differs by the abnormal venation and a very long ovipositor "suggesting a habit of ovipositing deep in tissues". It resembles *Pontania*, but "lacks the hollows round the antennae of typical *Pontania*" (Benson 1963). The structure of the saw (Benson 1963: fig. 9) suggests, however, that it cannot belong to the genus *Nematus* but fits better the gall-making genera which were defined by Smith (1968) as "*Euura*-group" and segregated by Vikberg (1982) into a separate subtribe *Euurina* [the genera *Pontania* (including *Phyllocolpa*) and *Euura*].

I have examined the female and male paratypes of this species. In this paper, I place *Nematus proteus* in the genus *Pontania*, subgenus *Eupontania*. This subgenus is widely distributed throughout the Holarctic Region producing closed leaf galls on various willows, but it has not been previously recorded that far south.

Taxonomy

Pontania (Eupontania) proteus (Benson, 1963) comb. n.

Nematus proteus Benson, 1963: 26-27. Holotype: ♀, "N.E. BURMA, Kambaiti, 7000 ft., 18.IV.1934, R. Malaise"; deposited in Naturhistoriska Riksmuseet Stockholm.

M a t e r i a l e x a m i n e d. N.E. Myanmar (Burma): 1 ♀, "N.E. Burma Kambaiti 7000 ft. 9/4 R. Malaise"; Paratype *Nematus proteus* Benson, det. R.B. Benson, 1962; ♂, "N.E. Burma Kambaiti 7000 ft. 17/4 R. Malaise"; Dissection on slide series No 28.x.58/2; Paratype *Nematus proteus* Benson, det. R.B. Benson, 1962.

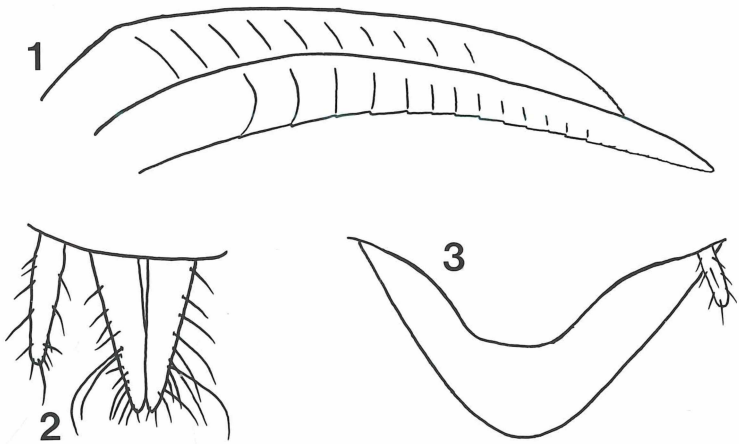
Additions to the original description are as follows:
FEMALE. Malar space pale on posterior half, black anteriorly. Frontal basin not very clearly defined laterally, frontal wall entire but not very distinct, without any trace of lateral swelling or median notch. Clypeus emarginated apically less than 1/2 its length. Spurs short and straight. Cenchrus large, about as wide as distance between cenchri. Scutellum about as long as wide with erect fore angle. Saw with slightly sinuate lower margin. Lance narrow (Fig. 1), slightly angulate and dilated basally. Sawsheath in dorsal view triangular (Fig. 2), dorsal margin with a few short hairs on apical third, lateral apical hairs strongly bent.

Post-ocellar area smooth and shining. Frons and vertex with weak coriaceous surface sculpture; pubescence of frons rather dense and short, hairs suberect (inclined forward slightly), near front wall of frontal area ca. 0.042 mm. Antennal hollows shining, densely pilose. Front lobes of mesonotum with punctures which are about 1-3x their diameters from each other and with interspaces shining, with medial furrow rather shallow. Mesoscutellum almost entirely smooth and shining, with punctures only on front part. Posttergite of mesoscutellum densely punctured, shining. Mesepisternum densely pilose above, with sparser hairs below. Tergites of abdomen with strongly reduced pubescence and faint striated microsculpture.

M e a s u r e m e n t s. 3rd antennal segment/longest ocular diameter - 0.810; 3rd antennal segment: length/width - 3.091; compound eye: length/width - 3.091; POL:OOL - 0.900; POL:OCL - 1.714; hind femur/hind tibia - 0.719; hind femur: length/width - 4.042; hind tibia/hind tarsus - 1.244; inner hind spur/basitarsus length - 0.400; ovipositor length/hind femur length - 1.072; saw/femur length 1.148: 1.358 (in mm).

MALE. Procidentia large and broad as shown in Fig. 3.

DISCUSSION. To distinguish *Pontania* from *Nematus*, Benson used the shape of the antennal hollows, which are deeper in *Pontania* (including subgenus *Phyllocolpa*) and *Euura* than in *Nematus*. In some large specimens of the *Pontania relictana*- and *vesicator*-groups these hollows look rather shallow as in *Nematus*. *Nematus proteus* differs from all other *Nematini* by presence of the basal loop of the anal cell in the forewing (in females), but the following characters support its placement in *Pontania* (subgenus *Eupontania*): Ovipositor long; saw (lancet) with single marginal sensilla per saw tooth (cf. Smith 1968); general shape of ovipositor (lancet + lances) intermediate between that of more advanced species of *Eupontania* and *P. relictana*-group (cf. Zinovjev 1993); and mandibles subsymmetric in lateral view, both rather evenly tapering from base to apex (this character distinguishes *Eupontania* species from other subgenera of *Pontania* and the genus *Nematus*).

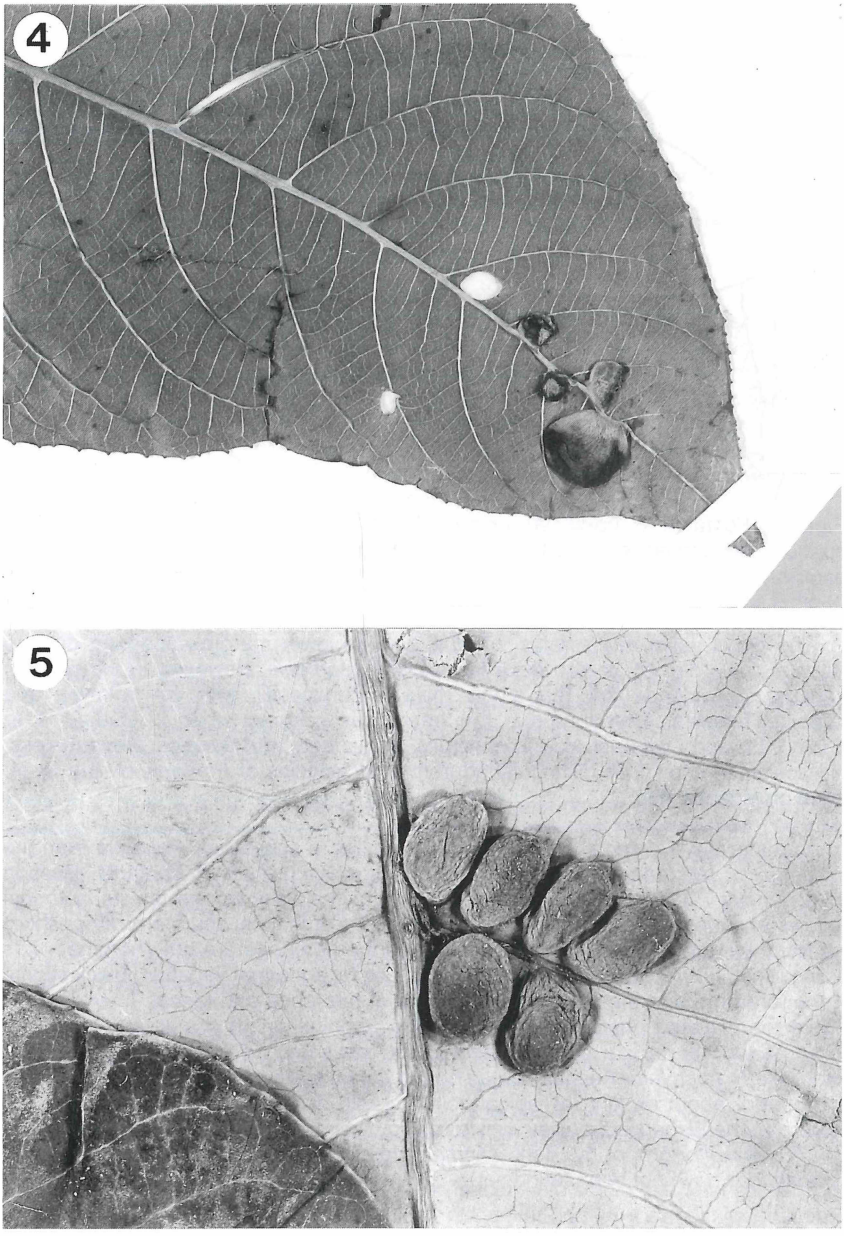


Figs 1-3. *Pontania (Eupontania) proteus* (Benson, 1963): 1 - female ovipositor (lancet and lance); 2 - sawsheath in upper view; 3 - male procidentia.

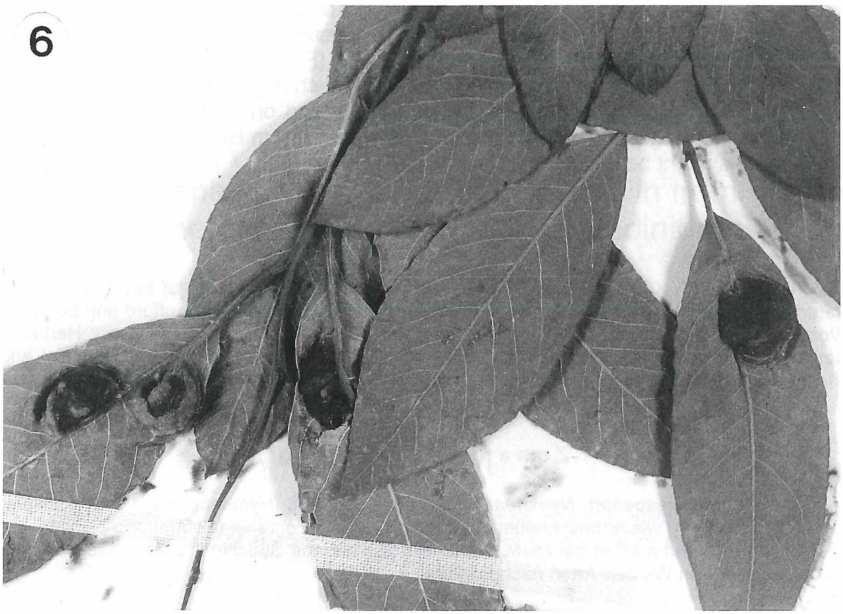
The penis valve of *Nematus proteus*, with its lower margin appearing dentate (Benson 1963: fig. 5), is also quite typical for *Eupontania*. However, in my opinion, there is no evidence that this single male is conspecific with the holotype and paratype females. Unfortunately, the head was missing when I studied it in 1993/1994, and I was not able to check its congenerity with females. Nevertheless, this specimen should be distinguished from other species of *Pontania* by the large, broad procidentia (Fig. 3).

Superficially, *Pontania proteus* is rather similar to species of *Pontania* from the *vesicator*- or *relictana*-groups. In the keys to species groups of *Pontania* (Benson 1960; Zinovjev 1993), this species runs best to the *vesicator*-group: its antennal hollows and mesepisternum are densely pilose, the hind tibial spurs are rather short, the front wall of the frontal area is entire, and the antennae are not shortened. It is distinguished from known species of these groups by abnormal venation, black stigma of the forewing, and the structure and shape of the lance and lancet. In addition, it differs from related species by the following combination of characters: scutellum about as long as broad; ground colour black; sawsheath with strongly bent apical setae (like *P. pustulator* Forsius); setae on the dorsal margin present; hind tibial spurs not curved, about as long as apical tibial breadth. It looks most similar to the Far Eastern *P. mandshurica* Zinovjev, which is also distinguished from typical members of the *P. vesicator*-group by dark stigma and dark colour pattern (males of *P. mandshurica* have not been found yet).

The biology of *Pontania (Eupontania) proteus* is unknown. However, it is likely to produce typical leaf galls on willows as the rest of *Eupontania*. *Pontania* galls have not been recorded from Southeast Asia. While examining the willow samples in the Herbaria of Harvard University in 1995-1996, I found *Pontania* galls on various *Salix*



Figs 4-5. The *Salix* species in Southeast Asia with galls of *Pontania*: 4 - *S. fargesii* Buxkill; 5 - *S. magnifica* Hemsl. (visible are the scars at the site of egg-laying).



Figs 6-7. The *Salix* species in Southeast Asia with galls of *Pontania*: 6 - *S. dictyoneura* Seemen; 7 - *S. dunnii* Schneider.

species from South China (some of these willows are still yet unidentified). The galls which might belong to the *Pontania viminalis*-group were found on *S. ernestii* Schneider from Sichuan Province, *S. fargesii* Burkill (Fig. 4) from Hubei, *S. magnifica* Hemsl. (Fig. 5) from Sichuan Province. The galls which might belong to the *Pontania (Eupontania) vesicator*- or *relictana*-groups were found on *S. dictyoneura* Seemen (Fig. 6) from Guangxi and *S. dunnii* Schneider (Fig. 7) from Hunan Province. One of these willows might be the host plant for *Pontania proteus*.

Acknowledgements

I thank Drs. T. Kronestedt and F. Ronquist for loan of the paratypes of this species from Naturhistoriska Riksmuseet, Stockholm; I am very grateful to Drs. David Boufford and Emily W. Wood for providing an opportunity to study willow samples in Harvard University Herbaria, Cambridge, Massachusetts, USA; to Dr. David R. Smith for reviewing of the manuscript and checking the English and to Prof. A. K. Skvortsov for the help with systematics of the willows.

Zusammenfassung

Eine Pflanzenwespenart, *Nematus proteus* Benson, 1968 (Hymenoptera, Tenthredinidae) aus NO Burma wird wiederbeschrieben und in die Gattung *Pontania* (Subgattung *Eupontiana*) gestellt. Von *Pontania*-Arten gebildete Gallen wurden auf aus Südchina stammenden Blättern von verschiedenen Weiden-Arten nachgewiesen.

References

Benson, R. B., 1960: Studies in *Pontania* (Hym., Tenthredinidae). - Bull. Brit. Mus. (Nat. Hist.), Entomol., **8** (9): 369-384. London.

-- 1963: The Nematinae (Hymenoptera, Tenthredinidae) of south-east Asia. - Ent. Tidskr., **84**: 18-27. Stockholm.

Smith, E. L., 1968: Biosystematics and morphology of Symphyta. I. Stem-galling *Euura* of the California Region, and a new female genitalic nomenclature. - Ann. entomol. Soc. Amer., **61** (6): 1389-1407. College Park.

Vikberg, V., 1982: Notes on the taxonomy and the nomenclature of some mainly Fennoscandian sawflies (Hymenoptera, Symphyta). - Notulae entom., **62**: 61-67. Helsingfors.

Zinovjev, A. G., 1993: Subgenera and Palaearctic species groups of the genus *Pontania*, with notes on the taxonomy of some European species of the *viminalis*-group (Hymenoptera: Tenthredinidae). - Zoosyst. Rossica, **2** (1): 145-154. St. Petersburg.

Author's address:

Dr. Alexei G. Zinovjev, Zoological Institute, Academy of Sciences, St. Petersburg, 199034, Russia.