

Die an Ichneumoniden reichsten Gebiete in der Umgebung von Erlangen sind die bewaldeten Hänge des Rathsbergs und die Wiesen und das Ufergebüsch an der Gründlach zwischen der Bundesstraße 4 und Neunhof und die anschließenden Waldränder. Als sehr formenreich erwies sich ein Waldrand bei Leuzenberg, nahe Hersbruck im Juragebiet.

Eine größere Zahl von Gattungen scheidet einen deutlich wahrnehmbaren Geruch ab. Meistens sind es unscheinbar gefärbte Arten (*Alexeter*, *Pimpla*, *Apechthis*, *Xenoschesis*, *Lagarotis* u. a.); der Geruch ist vermutlich ein Schutz gegen das Gefressenwerden.

Summary

The author reports 915 species of *Ichneumonidae* from the environment of Nuremberg-Erlangen with a German summary containing additional notes on distribution and biology of these species.

Резюме

Автор дает сведения о 915 видах *Ichneumonidae* из окрестности Нюрнберг-Эрланген с резюме на немецком языке, содержащим дополнительные сведения о распространении и биологии этих видов.

A New Genus of *Proctotrupidae* from Japan

(*Hymenoptera: Proctotrupoidea*)

By

LUBOMIR MASNER

Czechoslovak Academy of Science, Institute of Biology,

Department of Insect Pathology, Praha

(With 4 figures)

In 1954, WATANABE described an interesting new *Disogmus*-species, which was bred as a solitary parasite of the larva of *Afissa admirabilis* (Crotch.) (Col. *Coccinellidae*). The author is inclined to suggest that the mentioned *Disogmus*-species represents really a new genus of *Proctotrupidae*, showing the nearest relationship to Taiwanese *Nothoserphus* Brues and partially also to European *Thomsonina* Hellén.

I am taking this opportunity to express herewith my best thanks to Dr. W. L. BROWN Jr. (Museum of Comparative Zoölogy, Cambridge, Mass.), Dr. H. PSCHORN-WALCHER (Commonwealth Institute of Biological Control, Feldmeilen-Zürich) and Dr. Ch. WATANABE (Entomological Institute, Hokkaido University, Sapporo) for their kind assistance.

Watanabeia n. g.

Diagnosis (♀♂) — Head extremely transverse, very short and nearly mantide-like in shape (seen from front). Eyes — seen from above — strongly convex, temples entirely absent. Mandibles not visible, appearing to be absent, quite overlapped by clypeus. Vertex — in frontal view — straight, showing no blade-like projections above lateral ocelli. Antennae distinctly 13jointed; in male some of the funicular joints bearing a small sclerotized keel. Scape unarmed.

Thorax resembling much those in *Helorus*-species, strongly convex, considerably short and massive; seen from above very broad. Anterior corners of pronotum blunt, distinctly prominent. Pronotum with rough sculpture aside. Parapsidal furrows deeply impressed, reaching the back

half of mesoscutum and there remarkably enlarged. Each parapsidal sulcus along its whole length distinctly crenulate. Mesoscutum with strongly crenulated marginal ridge. Two prominent corners aside scutellum (on postero-lateral margin of mesoscutum). Scutellar sulcus deep, transverse, with longitudinal keels. Metanotum narrow, unarmed. Propodeum low, unarmed, nearly neck-like protruded posteriorly, strongly reticulate throughout, with a shallow longitudinal excavation in the middle.

Fore wings relatively short and broad; C and Sc distinctly sclerotized, M and basalis indicated only in mere traces. Pterostigma remarkably developed, large, 4 times as long as the narrow radial cell. Stigmals nearly fused with upper parts of pterostigma and R_2 .

Legs rather slender, the spur of hind tibia relatively short. Claws simple.

Petiolus as long as wide, not covered by the following tergite. Second abdominal tergite the largest. Abdomen (behind petiolus) showing two tergites only. Sheaths of ovipositor in female indistinct, very short, as long as the longer spur of tibia III. Genital claspers in male also very short and blunt. (Redescribed on base of one male — paratype (coll. WATANABE), as well as WATANABE's original diagnosis of *Disogmus afissae* Wat.).

Genotype — *Disogmus afissae* Watanabe, 1954

Host — *Afissa admirabilis* (Crotch.)

Bionomy — solitary entoparasite of the larva

Distribution — Hokkaido (Japan)

I allow me to name this remarkable genus in honour of its discoverer — Dr. CHIHISA WATANABE, the well-known Japanese hymenopterologist.

Through its curious shape of the body, *Watanabeia* n. gen. is closely related to the Taiwanese *Nothoserphus Brues*, differing from it chiefly in having no processes above lateral ocelli, second tergite not distinctly punctated apically and antennae distinctly 13 jointed in both sexes. By courtesy of Mr. W. L. BROWN (Cambridge, Mass.) the author was able to control the paratype [male] of *Nothoserphus mirabilis Brues*. It is of evidence that both genera — *Nothoserphus Brues* and *Watanabeia* n. g. are closely related, representing perhaps the most archaic types in *Proctotrupidae*. Some of their characters, however, should be considered as derived — namely shape of head, low number of abdominal tergites, the type of wing — venation. Both genera are characterized (in dorsal view) by a short and stout thorax, thin head and small abdomen. Consequently they lack (seen from above) lengthened shape of body, which is so specific for all remaining genera of *Proctotrupidae*. It is of interest that two archaic Australian genera — namely *Acanthoserphus Dodd* and *Austroserphus Dodd* have been characterized by the elongated shape of body already. The remarkable short type of body occurs partially also in European *Thomsonina Hellén*. This genus possesses also a very short and thin head. It seems to be acceptable that this genus shows important phylogenetic relationship to both — *Nothoserphus Brues*

and *Watanabeia* n. g. — *Nothoserphus* Brues, however, possesses one striking character namely the high number of antennal joints. BRUES (1940) states the both specimens (holotype and paratype) are damaged, having the apical antennal joints broken. Nevertheless, in the holotype there remain

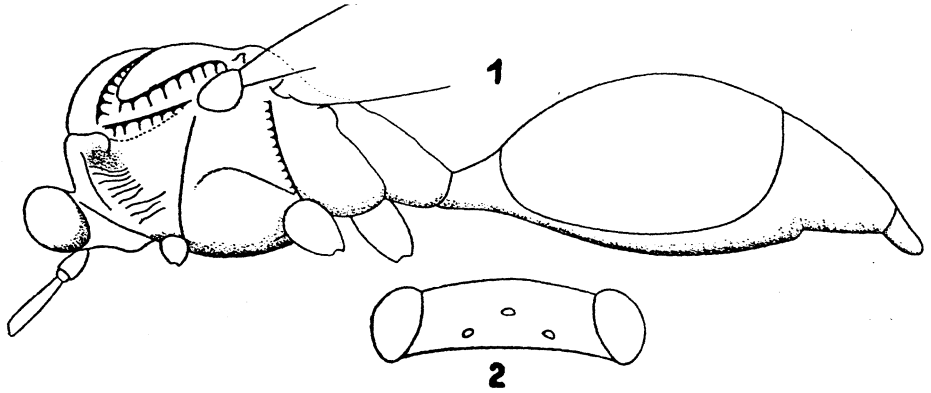


Fig. 1. *Watanabeia afissae* (Watanabe). Lateral aspect of male
Fig. 2. *Watanabeia afissae* (Watanabe). Head of male (dorsal aspect)

still 13 joints. On account of this BRUES supposes the antennae being 14- or 15 jointed in *Nothoserphus*. Unfortunately, the paratype examined has the antennae broken near the base, so that it has been impossible to

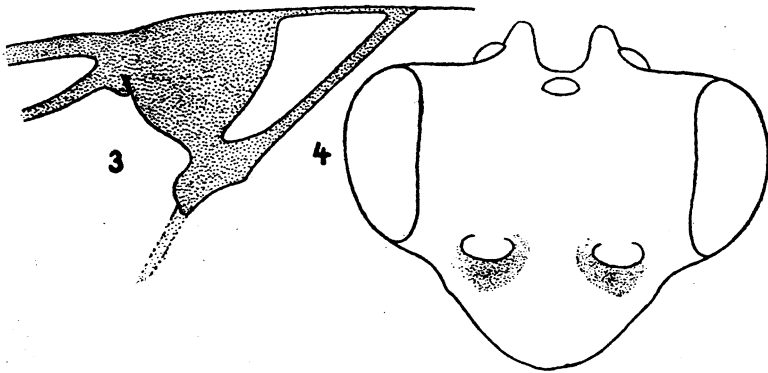


Fig. 3. *Nothoserphus mirabilis* Brues. Pterostigma of male (paratype)
Fig. 4. *Nothoserphus mirabilis* Brues. Head of male (paratype) frontal view

revide the total number of joints. Mr. BROWN controlled again the holotype and states that it has actually broken but yet 13 jointed antennae. So, *Nothoserphus* Brues is the sole exception in *Proctotrupidæ*, having more than 13 antennal joints. This character shall be, of course, considered as an archaic one, showing simultaneously the relationship between *Proctotrupidæ* and other archaic families of *Proctotrupoidea* (*Heloridae*, *Roproniidae*).

For the more instructive idea of *Nothoserphus* Brues, the figures of head and pterostigma are attached. It is worth to be noticed that the radial cell is somewhat longer (at its costal edge) than BRUES (1940) states.

Into the following key have been enclosed all genera of *Proctotrupidae* of the whole world, described up to now:

1. Scape produced into an acute spine. Medialis well developed; venation considerably complete 2
- Scape unarmed. Medialis in form of mere trace, or entirely lacking; venation considerably reduced 3
2. Metanotum medially raised into long, backwardly curved projection (Australia) *Acanthoserphus* Dodd
- Metanotum medially not raised to form such projection (Australia) *Austroserphus* Dodd
3. Head — in dorsal aspect — extremely transverse and thin (as e. g. in fig. 2). Temples absent, eyes extremely developed 4
- Head of normal shape i. e. transverse, temples well developed 6
4. Parapsidal furrows reduced to mere pits, situated anteriorly. Head nearly lens-like in shape (Europe) *Thomsonina* Hellén
- Parapsidal furrows well developed, crenulated, enlarged posteriorly 5
5. Vertex — above lateral ocelli — raised in two thin hornlike projections (fig. 4). Parapsidal furrows forked anteriorly. Antennae presumably with more than 13 joints (Taiwan) *Nothoserphus* Brues
- Vertex quite straight above, with no such projection. Parapsidal furrows simple. Antennae distinctly 13 jointed (Japan) *Watanabeia* n. gen.
6. Claws I and II forked, bifide or trifide. Apical tarsal joint enlarged (nearly world wide in distribution) *Codrus* Panz.
syn.: *Exallonyx* Kieff. 7
- All claws simple 7
7. Propodeum quite smooth and polished, without longitudinal central keel or ridge. Wing venation in male very pale and indistinct. Wings in female reduced to small stumps (Europe) *Paracodrus* Kieff.
- Propodeum not quite smooth, sculptured, with keels or ridges 8
8. Petiolus fully covered and overlapped by the second tergite above 9
- Petiolus free at least at its proximal part 10
9. Radial cell nearly as long as pterostigma. Sheats of ovipositor in female thin, as long as the hind tibia (nearly world wide in distribution) *Cryptoserphus* Kieff.
- Radial cell considerably shorter than the thick pterostigma. Sheats of ovipositor in female thick, shorter than the hind tibia (Europe) *Brachyserphus* Hellén
10. Parapsidal furrows well developed, backwards often somewhat reduced. Sheats of ovipositor in female very long and thin. Radial cell usually large (nearly world wide in distribution) *Disogmus* Foerst.
- Parapsidal furrows absent (several Australian spp. of *Proctotrupes* Latr. show a traces of parapsidal furrows) 11
11. Sheats of ovipositor in female thin and long. Propleurae (♀ ♂) sculptured; abdomen often reddish near the base. Rather large species (8—11 mm) (nearly world wide in distribution) *Proctotrupes* Latr.
syn.: *Erodorus* Walckenaer
Eriodorus Agassiz error
Proctotripes Provancher error
Proctotropis Gistel emend.
Proctotrupes Agassiz emend.
Proctrupes Rafinesque emend.
Serphus Schrank

- Sheaths of ovipositor in female thick and short. Proleurae smooth and sculptureless (except. part. *P. elongatus* [Hal.]). Abdomen usually black or brownish. Rather small species (3—7 mm) (nearly world wide in distribution) *Phaenoserphus* Kieff. syn.: *Carabiphagus* Morley

Zusammenfassung

Der Autor beschreibt eine neue Gattung, *Watanabeia* n. g. (*Proctotrupidae*), mit *Disogmus afissae* Watanabe (Japan) als Genotypus. Die phylogenetische Stellung der neuen Gattung wird kurz erörtert und abschließend ein Bestimmungsschlüssel der Proctotrupiden-Gattungen der Welt (einschließlich ihrer Synonymie) gegeben.

Summary

The author has established a new genus — *Watanabeia* n. g. (*Proctotrupidae*) — for *Disogmus afissae* Watanabe, originally described from Japan. A short discussion concerning phylogenetic evaluation of the new genus is added. Finally a key to genera of *Proctotrupidae* of the world with their synonymy is given.

Резюме

Автор описывает новый род *Watanabeia* n. g. (*Proctotrupidae*) с *Disogmus afissae* Watanabe (Япония) как генотип. Коротко затрагивается филогенетическое положение нового рода и в заключение дается шифр для определения родов *Proctotrupidae* мира (включая их синонимы).

References

- BRUES, Ch. T., *Serphidae* in Baltic amber, with description of a new living genus. *Calliceratidae* in Baltic amber. Amer. Acad. Arts, Sci. Proc., **73**, 259—269, 1940.
- DODD, A. P., Australian Hymenoptera *Proctotrypidae*. Trans. Roy. Soc. S. Austr., **39**, 384—454, 1915.
- DODD, A. P., A new genus and species of Australian *Proctotrupidae*. Linn. Proc. Soc. S.N.W., **58**, 275—277, 1933.
- HALIDAY, A. H., Hymenoptera Britannica Oxyura, Fasc. 1. London, 1839.
- HELLEN, W., Uebersicht der Proctotrupiden (*Hym.*) Ostfennoskandiens — 1. *Heloridae*, *Proctotrupidae*. Not. ent., **21**, 28—42, 1941.
- KIEFFER, J. J., *Serphidae* et *Calliceratidae*. Das Tierreich, **42**, Berlin, 1914.
- NIXON, G. E. J., A preliminary revision of the British *Proctotrupinae* (*Hym. Proctotrupidae*). Trans. R. ent. Soc. Lond., **87**, 431—466, 1938.
- RIEK, E. F., Australian wasps of the family *Proctotrupidae* (*Hymenoptera: Proctotrupidae*). Austral. Journ. Zool. **3**, 106—117, 1955.
- WATANABE, Ch., A new species and host records of *Proctotrupidae* (*Hymenoptera*). Mushi, **26**, 5—8, 1954.