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The species of the genus *Thysanarthria* D'ORCHYMONT, 1926

(Coleoptera, Hydrophilidae)

Mit 10 Figuren

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Summary

A short review of the Hydrophilidae genus *Thysanarthria* D'ORCHYMONT, 1926 is given and 6 species are described as new to science: *Thysanarthria bengalensis* n. sp., *T. brincki* n. sp., *T. ceylonensis* n. sp., *T. hongsonensis* n. sp., *T. madurensis* n. sp., *T. siamensis* n. sp. A short key to all known species is added.

Key words

Coleoptera, Hydrophilidae, genus *Thysanarthria*, review, new species.

Zusammenfassung

Die Hydrophilien-Gattung *Thysanarthria* D'ORCHYMONT, Nachbargattung zu *Chaetarthria*, mit bisher 4 beschriebenen Arten (*atriceps* RÉGIMBART, *britteni* BALFOUR-BROWNE, *championi* KNISCH, *sulcata* CHIESA) konnte in vorliegender Arbeit um weitere 6 Arten (*bengalensis*, *brincki*, *ceylonensis*, *hongsonensis*, *madurensis* und *siamensis* spp. n.) ergänzt werden. Die Verbreitung erstreckt sich von Afrika über Arabien, Afghanistan und Indien bis Indochina. Eine Bestimmungstabelle und die Aedoeagi aller bisher bekannten Arten ergänzen die Beschreibungen.

Introduction

In 1903 M. RÉGIMBART described *Hydrobius atriceps* from Madagascar, mentioning that this species should be representing a distinct genus. In 1924 A. KNISCH described another member of that dubious genus from northern India (Kumaon, W. Almora and Raniket) as *Chaetarthria championi*, hesitating yet to delimit it from *Chaetarthria*. At least A. D'ORCHYMONT (1926) erected a separate genus *Thysanarthria* for these two particular species of the tribe Chaetarthriini. Much more later A. CHIESA (1967) described a third species from Afghanistan creating the genus *Chaetarthriomorpha* for it, evidently without knowledge of D'ORCHYMONT's paper.

At present more material of this rare and likely overlooked genus is available and causes a little review with description of additional new species.

Little is known about the habitat of these very small beetles, but it is to suppose that there are great affinities to the genus *Chaetarthria* in this regard. Observations yielded that these species are living apparently semiaquatic at the edges of running water, between sand and gravel. Repeatedly specimens have been captured also at light.

Genus diagnosis

Within the tribe Chaetarthriini the genera *Chaetarthria* and *Thysanarthria* are characterized by the 1st and 2nd ventrit completely covered by a fringe of long stiff setae. *Thysanarthria* differs from *Chaetarthria* in the presence of 10 sharply impressed impunctate elytral striae abbreviated anteriorly. All known species are very small (1.3-2.0 mm) with black head and testaceous to brown or even black pronotum and elytra. Eyes and labrum of all species are rather large.

Abbreviations

CHG	-	Coll. F. Hebauer, Grafing
MHNP	-	Muséum national d'Histoire naturelle Paris
MNB	-	Museum für Naturkunde an der A. Humboldt-Universität Berlin
MTD	-	Staatliches Museum für Tierkunde Dresden
NHM	-	British Museum (Natural History), London
NMB	-	Naturhistorisches Museum Basel
NME	-	Naturkundemuseum Erfurt
NML	-	Natural History Museum Lund, Sweden
NMW	-	Naturhistorisches Museum Wien, Austria

The species

1. *Thysanarthria atriceps* (RÉGIMBART, 1903)

1903 *Hydrobius atriceps* RÉGIMBART, Anns. Soc. ent. France, 72: 33.

Redescription: Length: 1.2-1.5 mm.- Rounded oval, highly arched, head and pronotum obsoletely and distantly punctate, both mat, strongly shagreened. Head black, pronotum and elytra testaceous, rarely dark brown. Legs and mouthparts yellow. Elytral striae deeply impressed apically. Aedeagus with median lobe narrowed in apical half. Parameres about as long as basal piece, basally wide, strongly curved laterally, apical half sinuate and strongly narrowed, from there straight until broadly rounded tips. (Fig. 1).

Records: **Botswana:** 10.III.1993 (MNB).- **Cameroon:** 15 km SE Bafia, Boura, partially parched small stream with riverine forest in Savannah, 13.I.1978, at light, loc. 23; Lund University System. Dept. Sweden Cameroon Exp. Dec.-Jan. 1977-78, Gårdenfors-Hall-Samuelsson (NML).- **Burundi:** W Rusizi-Delta, 22.II.1992, leg. Arndt (NME).- **Namibia:**

Fish River Canyon, Ai-Ais, Fish River, shore of water holes, 27°55'S/ 17°29'E, 250 m, 21.XI. 1993, leg. M. Uhlig (MNB); Kaokou, Hoanib River, 10 km SE Warmquelle, 19°13'S/ 13°52'E, 18.II.1994, sievings: grass + leaf litter + flood refuse, leg. M. Uhlig (MNB).- **Rwanda** (Basilewsky 1953).- **Sierra Leone**: Makeni, 12°03'W-08°53'N, 28.XI.1993, Lund University Sierra Leone Exped. 1993, leg. L. Cederholm & R. Daniels-son & R. Hall (NML).- **Swaziland**: Mlilwane Wildlife Sanctuary, 26°29,22'S/ 31°11'E, 800 m NN, 17.-19.XI.1996, leg. M. Hartmann (NME).- **Zimbabwe**: Matopos NP, 20°33'S/ 28°30'E, 28.XI.1.XII.1993, lux, leg. M. Uhlig (MNB).

Distribution: Africa (Botswana, Burundi, Ivory Coast, Rwanda, Sierra Leone, Zimbabwe), Madagascar.

2. *Thysanarthria bengalensis* n. sp.

Holotype (male): East Pakistan: Dinajpur, X.1969, Barbe' (CHG).

Description: Length: 2.0 mm.- Globular, strongly convex. Head black, pronotum, elytra, legs and mouthparts testaceous. Head and pronotum shallowly distantly punctate, both strongly shagreened. Elytral striae nearly reaching base of elytron, apically sharply impressed; interstriae increasing convex to apex.- Aedeagus with narrow, nearly parallel-sided, apically shortly pointed median lobe. Parameres half-moon-shaped, strongly convex laterally, concave at inner margin, acutely pointed apically. Basal piece strongly narrowed basally. (Fig. 4).

Without a male this species is hardly to separate from the African *T. atriceps*.

Distribution: Until now only known from type locality.

3. *Thysanarthria brincki* n. sp.

Holotype (male): Ceylon, N. Prov. Kudattanai 6 mls SE Point Pedro, 13.II.1962, loc. 70/ At pond in semidesert/ Lund University Ceylon Expedition 1962, Brinck-Andersson-Cederholm. (NML).

Paratypes: 1 male: Ceylon, E.Prov., Madura Oya, 15 mls NNW Bibile, 13.III.1962. loc. 138/ Near River/ Lund University Ceylon Expedition 1962, Brinck-Andersson-Cederholm (NML).

Description: Length: 1.5 mm.- Globular, strongly convex. Head black, pronotum elytra, legs and mouthparts testaceous. Head and pronotum completely shagreened, mat, shallowly finely distantly punctate. Elytral series shortened at about basal third, strongly impressed to apex, interstriae apically increasing convex.- Aedeagus with broad tongue-shaped median lobe. Parameres only slightly rounded laterally, sinuate subapically, apices broadly sloped. (Fig. 2).

This species seems to be close to *T. britteni* by the shape of the male genitalia, but clearly smaller and with head and pronotum completely shagreened. It is dedicated to its discoverer Mr. Brinck from the Lund University Museum.

Distribution: Sri Lanka.

4. *Thysanarthria brittoni* BALFOUR-BROWNE, 1951

1951 *Thysanarthria brittoni*, J. BALFOUR-BROWNE, 1951, Brit. Exped. South-West Arabia, p. 215.

Records: Only types known (BML).

Redescription: Length: 1.76.- Globular, strongly convex, rather shining; head black, pronotum and elytra testaceous; head and pronotum with subobsolete reticulation, rather shining with large shallow setigerous punctures. Without external sexual dimorphism.- Aedeagus with narrow, parallel-sided median lobe; tips of parameres apically diverging. (Fig. 3).

Distribution: Arabian peninsula.

5. *Thysanarthria ceylonensis* n. sp.

Holotype (male): Ceylon, N.Prov. Kudattanai 6 mls SE Point Pedro, 13.II.1962, loc. 70/ At pond in semidesert/ Lund University Ceylon Expedition 1962, Brinck-Andersson-Cederholm. (NML).

Paratypes: 1 male, 1 female: Ceylon, E.Prov., Madura Oya, 15 mls NNW Bibile, 13.III.1962, loc. 138/ Near River/ Lund University Ceylon Expedition 1962, Brinck-Andersson-Cederholm. (NML).- 1 female: Ceylon, Sabaragamuwa Prov. Kitulgala 21 mls N Ratnapura, 17.III.1962, loc. 152/ At light/ Lund Univ. Ceylon Exp. 1962, Brinck-Andersson-Cederholm. (NML).- 1 female: Ceylon, Sabaragamuwa, Prov. Rakwana, 27.-28.II.1962, loc. 100/ Lund Univ. Ceylon Exp. 1962, Brinck-Andersson-Cederholm. (NML).- 1 female: Ceylon, Prov. of Uva, Mahaveli Ganga at Alutnuwara, 24 mls E Kandy, 12.III.1952, loc. 136/ Lund Univ. Ceylon Exp. 1962, Brinck-Andersson-Cederholm. (NML).- 1 female: Ceylon, E. Prov. Gal Oya. Alt. 300 ft. 14 mls E Bibile, 8.III.1962, loc. 122/ Lund Univ. Ceylon Exp. 1962, Brinck-Andersson-Cederholm. (NML).- 1 female: Ceylon, N.Prov. Per Aru, 9 mls E Mankulam, 14.II.1962, loc. 77/ Lund Univ. Ceylon Exp. 1962, Brinck-Andersson-Cederholm. (NML).- 1 female: Ceylon, E.Prov. Inginiyagala, 8.-9.III.1962, loc. 126/ Lund Univ. Ceylon Exp. 1962, Brinck-Andersson-Cederholm. (NML).- 1 female: Ceylon, W.Prov. Yakkala 18 mls NE Colombo, 4.-31.I.1962, at light, loc. 10/ Lund Univ. Ceylon Exp. 1962, Brinck-Andersson-Cederholm. (NML).

Description: Length: 1.3 mm.- Globular, strongly convex. Head black, pronotum testaceous with darkened disc, elytra brown, laterally and apically brightened, shining. Legs and mouthparts testaceous. Head and pronotum finely distantly punctate. Head completely shagreened, pronotum smooth, shining. Elytral series 5-10 nearly reaching base of elytron, apically strongly impressed, interstriae microreticulate, strongly convex to apex.- Aedeagus with tongue-shaped median lobe, shorter than parameres; the latter half the length of the basal piece, sinuate in apical half, tips broadly rounded at outer margin, rectangular at inner face. (Fig. 9).

This very small species is to separate from the sympatric *T. madurensis* of same size by the completely shagreened head in combination with the smooth and shining pronotum.

Distribution: Sri Lanka.

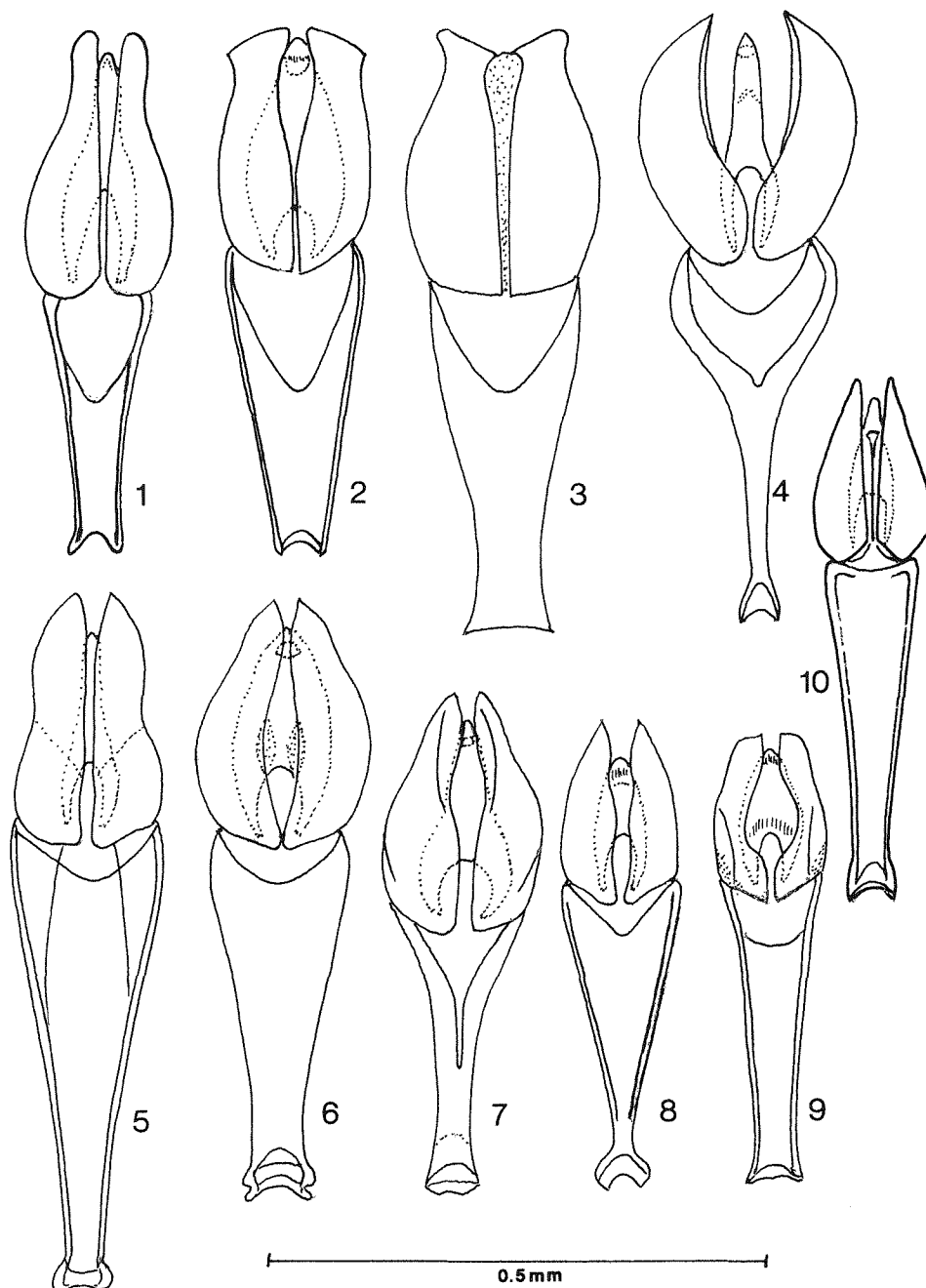


Fig. 1: *Thysanarthria atriceps* (RÉG); (Burundi), aedeagus. **Fig. 2:** *Thysanarthria brincki* n. sp.; aedeagus. **Fig. 3:** *Thysanarthria brittoni* BALFOUR-BROWNE; aedeagus (after BALF.-BR., redrawn). **Fig. 4:** *Thysanarthria bengalensis* n. sp.; aedeagus. **Fig. 5:** *Thysanarthria siamensis* n. sp.; aedeagus. **Fig. 6:** *Thysanarthria championi* (KNISCH); aedeagus. **Fig. 7:** *Thysanarthria sulcata* (CHIESA); (Arabian peninsula), aedeagus. **Fig. 8:** *Thysanarthria madurensis* n. sp.; aedeagus. **Fig. 9:** *Thysanarthria ceylonensis* n. sp.; aedeagus. **Fig. 10:** *Thysanarthria bongsonensis* n. sp.; aedeagus.

6. *Thysanarthria championi* (KNISCH, 1924)

1924 *Chaetarhria championi* KNISCH, Wien. Ent. Ztg. 41 (1-3): 40.

Redescription: Length: 1.9 mm.- Oval, moderately convex, shining. Head black, pronotum brown, laterally brightened, shining, without distinct reticulation; elytra brown to testaceous with rufo-testaceous sides. External sexual dimorphism present.- Aedeagus with broad tongue-shaped median lobe; outer margin of parameres strongly convex with pointed tips nearly touching one another; parameres compared with the basal piece in the ratio of 3:5. (Fig. 6).

Records: **India:** Uttar Pradesh, Kumaon, W Almora & Raniket (MHNP, Types).- **Nepal:** Prov. Bheri, Distr. Dailekh S Katia Kholā, 800 m, 31.V.1995, leg. A. Weigel (NME).- **Nepal:** S-Ganesh Himal village, near Kali Sundhars Bazar 700 m, 24.-25.V.1996, leg. Ahrens, Kulbe, Rulik. (MTD, CHG).- **Nepal:** Kathmandu N; Bagmati River, 1300 m, 27.IV.1995, leg. M. Hartmann. (NME).- **Laos:** centr. Prov. Bolikhamsai, Ban Nape, Kaew Nua-P. 18.IV.-1.V.1998, leg. E. Jendek & O. Sausa. (CHG).

Distribution: North-India, Nepal, Laos.- The cotypes mentioned by KNISCH from Tonkin, Lac Tho possibly are belonging to *T. siamensis* sp. n.

7. *Thysanarthria hongsonensis* n. sp.

Holotype (male): Thai, N. Mae Hong Son prov., Soppong env. 600 m, 19°27'N, 98°20'E, 28.5.-2.6.1999, D. Hauck leg. (CHG).

Paratypes: 2 ex. (same data, CHG).

Description: Length: 1.5 mm; width: 1.0 mm.- Globular, strongly convex. Head black, pronotum, elytra, legs and mouthparts testaceous; disc of pronotum, elytral series and ultimate segment of maxillary palpi diffusely darkened. Head and pronotum rather coarsely and distantly punctate, setigerous, both shining, without distinct microsculpture. Elytral series shortened basally, less impressed there, increasing impressed to apex. Interstriae increasing convex and narrowed apically, nearly impunctate, with very fine and scattered pubescence. Aedeagus with rather narrow median lobe; parameres about 2/3 the length of basal piece, basally wide, extended curved at outer face, straight at inner face, tips not quite acute.

This species is to separate from the sympatric *T. siamensis* by the much coarser punctation of head and pronotum besides the smaller size and the quite different male genitalia.

Distribution: Thailand.

8. *Thysanarthria madurensis* n. sp.

Holotype (male): Ceylon, E. Prov. Madura Oya, 15 mls NNW Bibile, 13.III.1962, loc. 138/ Near River/ Lund University Ceylon Expedition 1962, Brinck-Andersson-Cederholm. (NML).

Paratypes: 2 male: (same data, NML, CHG).

Description: Length: 1.3 mm.- Globular, strongly convex. Head black, pronotum, elytra, legs and mouthparts pale yellow, a little dull. Head and pronotum moderately fine and distantly, but very shallowly punctate, both completely shagreened. Elytral series 3-9 nearly reaching base of elytron, apically strongly impressed; interstriae obsoletely microreticulate, shining, strongly convex to apex.- Aedeagus slender, with tongue-shaped shortened median lobe. Parameres about half the length of the basal piece, laterally slightly rounded, terminally sharply pointed. (Fig. 8).

From the very similar sympatric *T. ceylonensis* this species differs in the dull, completely shagreened pronotum and the sharply pointed parameres.

Distribution: Sri Lanka.

9. *Thysanarthria siamensis* n. sp.

Holotype (male): N-Thailand, Mae Hong Son env. Ban Huai Po, 24.-30.VI.1993, leg. Schneider (NMW).

Description: Length: 1.7 mm.- Globular, strongly convex. Head black, pronotum, elytra, legs and mouthparts testaceous. Head and pronotum extremely fine and distantly setigerous punctate; both smooth, shining, without any reticulation. Elytra shining, elytral striae 3-9 nearly reaching base of elytron, apically sharply impressed; interstriae increasing convex to apex.- Aedeagus with narrow, parallel-sided median lobe. Parameres half the length of the basal piece, outer margin sinuate, terminally knife-shaped. (Fig. 5). This species is very close to *T. championi* and *T. hongsonensis*, but differs from the first by the little smaller size and more bright surface, the parameres are longer and more slender. From the latter it differs by the much finer punctation of head and pronotum, also by the larger size and the quite different aedeagus.

Distribution: Thailand.

10. *Thysanarthria sulcata* CHIESA, 1967

1967 *Chaetarthriomorpha sulcata* CHIESA, Anns. hist.-nat. Mus. nat. hung. 59: 276.

Redescription: Length: 1.5 mm.- Globular, strongly convex. Entirely piceous, laterally and apically slightly castaneous. Legs and palpi brown. Head obsoletely shagreened, pronotum smooth.- Aedeagus with median lobe strongly narrowed from base to the apex. Parameres nearly as long as basal piece, convex at outer margin, distinctly sinuate. (Fig. 7).

Records: Oman: Wadi Andam, 20 km N of Samad, 22°58'N/ 58°05'E, 650 m, 17.-18.IV.1985, leg. C. Holzschuh (NMB, CHG).

Distribution: Afghanistan, Oman.

Simplified key to all known species:

Species	Distribution	Size (mm)	Colour (pron./elytr.)	Reticulation head/pron
<i>Thysanarthria</i>				
- <i>atriceps</i> (RÉG.)	Africa	1.2-1.5	testaceous-brown	+ +
- <i>bengalensis</i> n. sp.	Bangladesh	2.0	testaceous	+ +
- <i>brittoni</i> Balf.-Br.	Arabia	1.7-1.8	testaceous	(+) (+)
- <i>brincki</i> n. sp.	Sri Lanka	1.5	testaceous	+ +
- <i>ceylonensis</i> n. sp.	Sri Lanka	1.3	brown	+ -
- <i>championi</i> (KNISCH)	India	1.9	brown	(+) -
- <i>hongsonensis</i> n. sp.	Thailand	1.5	testaceous-brown	- -
- <i>madurensis</i> n. sp.	Sri Lanka	1.3	testaceous	+ +
- <i>siamensis</i> n. sp.	Thailand	1.5	testaceous	- -
- <i>sulcata</i> (CHIESA)	Afghan., Oman	1.6	black	(+) -

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