

BRAUERIA (Lunz am See, Austria) 42:29-30 (2015)

A new record of *Rhyacophila kadaphes* SCHMID, 1959 (Trichoptera: Rhyacophilidae) from Pakistan

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Abstract. A male of *Rhyacophila kadaphes* SCHMID, 1959 from Pakistan is described and figured.

Key words: Trichoptera, distribution, *Rhyacophila kadaphes*, Pakistan.

SCHMID (1959) collected and described the holotype male and allotype female of *Rhyacophila kadaphes* from Pakistan (Karakoram, Chhantir Gah), and had collected more specimens in the Himalayas (Besal, 8-9 July 1953, 2 ♂; Dunga Nar 27 July 1953, ♂, 3 ♀) and in the Karakoram (Singai Gah, 6-8 July 1954, 1 ♂; Chhantir Gah, 5-7 August 1954, 1 ♂, 2 females); Mahthantir Gah, 9-10 August 1954, 2 ♂, 1 ♀; Dalti, 7 September 1954, 1 ♂, 1 ♀; Shamran, 12-14 September 1954, 3 ♂). The male and female genital structures are shown in his figs 1-3 on pl. 27.

SAINI & KAUR (2012) reported more specimens from India: Jammu & Kashmir: Hunder, 3200 m, 05 August 2008, 1 ♂; Sonmarg, 2700 m, 11 August 2008, 1 ♂, 2 ♀; Sonmarg, 2700 m, 05 August 2009, 10 ♂, 1 ♀; Pahalgam, 2100 m, 12 August 2010, 2 ♂; Sonmarg, 2700 m, 26 June 2011, 1 ♂, 19 ♀; Himachal Pradesh: Marhi, 2700 m, 08 August 2008, 14 ♀; Losar, 4200 m, 22 August 2008, 1 ♂, 9 ♀; Kaza, 3700 m, 24 August 2008, 6 ♂, 1 ♀; Solang Valley, 2800 m, 05 July 2009, 1 ♂; Uttarakhand: Janki Chatti, 2600 m, 25 September 2008, 1 ♂, 2 ♀; Shyna Chatti, 2000 m, 27 September 2008, 5♂, 1♀.

On their Lepidoptera collecting expedition to Pakistan in 1998, Tibor Csöväri and László Mikus also captured caddisflies which they donated to the author who is grateful to them. Among the specimens were 3 males of *Rhyacophila kadaphes* which were caught by light trapping at an elevation of 2250 m in the Gilgit – Baltistan Province, Gilgit-valley, Jundrot village.

***Rhyacophila kadaphes* SCHMID, 1959**

Male. Body length 10.0 mm, length of each forewing 13.6 mm, width of each forewing 4.5 mm, length of each antenna 8.3 mm. Body, antennae, palpi, wings and legs yellowish brown. Abdomen yellow with black spots, genitalia yellow.

Male genitalia (Figs 1-4). (The following abbreviations are used: a.I.X. = apicodorsal lobe of segment IX; a.s. = anal sclerite; D = dorsal view; end = endotheca; f.s. = first segment of paired inferior appendages; L = left lateral view; p.app. = praeanal appendages; par. = paired parameres; ph. = phallicata (aed="aedéage" of Schmid 1970); s.j. = second joint of paired inferior appendages; ten. = paired tenons of the phallotheca; v.l. = ventral lobe of phallicata; V = ventral view; X = segment X). Apicodorsal lobe of segment IX (a.I.X. Figs 1, 3) relatively long, in lateral view, posteriorly rounded in the middle with a triangular little ear on either side in dorsal view. Segment X (X., Fig. 1) long and lobe-like in lateral view. The paired anal sclerites (a.s., Figs 1, 3) are elliptical bulges in lateral and dorsal views. Phallicata (ph., Figs 1, 2, 4) long, narrow tube in lateral view. Parameres (par., Figs 1, 2, 4) elongate, terminating in pointed apex in lateral and ventral views. Ventral lobe (v.l., Figs 1, 2, 4) narrow ribbon-like, longer than phallicata, ends in apex curved upward in lateral view. First segment of each inferior appendage (f.s., Fig. 1) moderately long, trapezoidal,

proximal margin broader than distal margin, longer than parameres; second joint of each inferior appendage (s.j., Fig. 1) with rounded dorsal apex and with lobe-like ventral part, elongate caudad in lateral view. Endotheca (end., Figs 1, 2, 4) short, membranous tube in lateral and ventral views; phallotheca (phal., Figs 1, 2, 4) broad, tubular, longer than endotheca in lateral and ventral views.

This species belongs to the *Rhyacophila hingstoni* Group of the *R. divaricata* Branch (SCHMID 1970). The male genitalia of the species are similar to those of *Rhyacophila kedara* SCHMID 1970 (p.128, pl. XXVI, figs 9, 10, herein Figs 5,6), but differs from them in that:

1. Apicodorsal lobe of segment IX with triangular little ear on either side posteriorly (without little ears in *R. kedara*).
2. The anal sclerites form elliptical bulges (not hammerhead as in *R. kedara*).
3. The phallicata is a long, narrow tube (unlike the phallicata in *R. kedara*).
4. Each parameres terminates in a pointed apex (not in lobe-like apex as in *R. kedara*).

Material examined: Pakistan, Gilgit-Baltistan Province, Gilgit-valley (35°53'N, 74°47'E, (2200 m), Jundrot village, 35°53'N, 74° 22'E, (2250 m) by light trapping, 27 July 1998, leg. Tibor Csöväri and László Mikus, 3 males (Figs 1-4, gen. prep. No. 124, coll. Ottó Kiss).

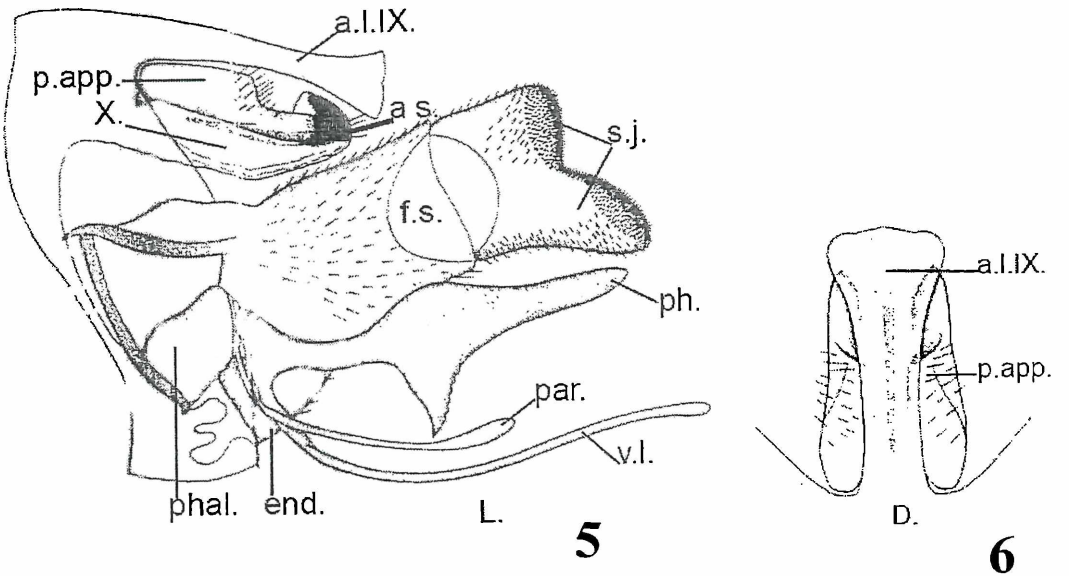
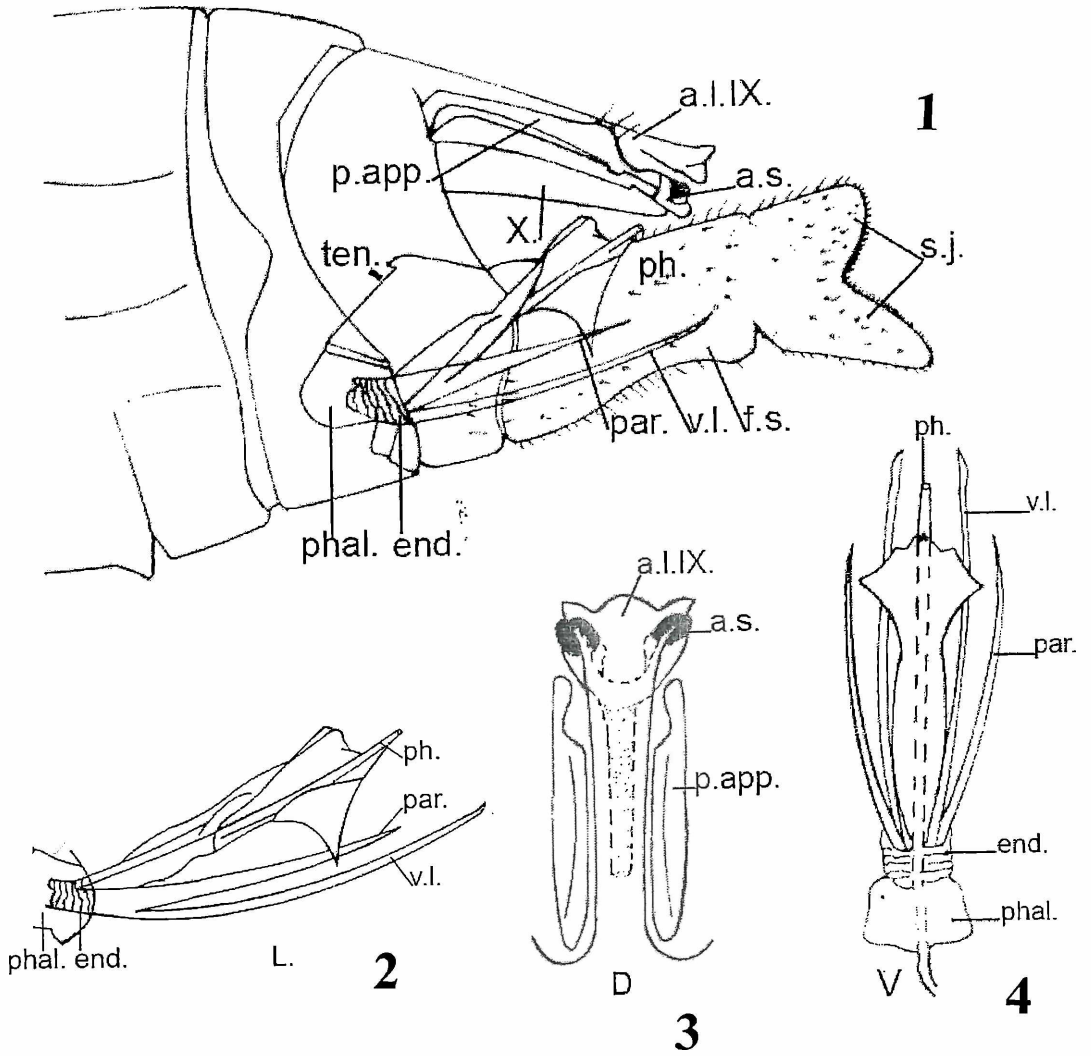
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Figs 1-4. *Rhyacophila kadaphes* SCHMID, 1970 male genitalia, 1, left lateral view; phallic apparatus, 2, left lateral view; 3, apicodorsal lobe of segment IX, anal sclerites, praeanal appendages, dorsal view (D); phallic apparatus, 4, endotheca, paired parameres, phallicata, phallotheca, ventral lobe of phallicata, ventral view (V); a.I.X. = apicodorsal lobe of segment IX; a.s. = anal sclerite; end = endotheca; f.s. = first segment of paired inferior appendages; p.app. = praeanal appendages; par. = paired parameres; ph. = phallicata; phal. = phallotheca; s.j. = second joint of paired inferior appendages; v.l. = ventral lobe of phallicata; X. = segment X (by the author).

Figs 5-6. *Rhyacophila kedara*, SCHMID, 1970 male genitalia, 5, left lateral view; 6, apicodorsal lobe of segment IX, praeanal appendages, dorsal view (D, drawings by Schmid); a.I.X. = apicodorsal lobe of segment IX; a.s. = anal sclerite; end = endotheca; f.s. = first segment of paired inferior appendages; p.app. = praeanal appendages; par. = paired parameres; ph. = phallicata; phal. = phallotheca; s.j. = second joint of paired inferior appendages; v.l. = ventral lobe of phallicata; X. = segment X.

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Autor(en)/Author(s): Kiss Ottó

Artikel/Article: [A new record of *Rhyacophila kadaphes* SCHMID, 1959 \(Trichoptera: Rhyacophilidae\) from Pakistan 29-30](#)