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A NEW SPECIES OF THE GENUS *HIMALOPSYCHE* (TRICHOPTERA, RHYACOPHILIDAE), WITH KEYS TO AND CATALOGUE OF INDIAN SPECIES

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A New Species of the Genus *Himalopsyche* (Trichoptera, Rhyacophilidae), with Keys to and Catalogue of Indian Species. Lakhwinder, K., Malkiat, S. Saini. — *Himalopsyche schmidi* sp. n. from Gehra (India: Himachal Pradesh) belonging to the *H. kuldschensis* group is described and illustrated. Keys to both males and females and a catalogue of Indian species of *Himalopsyche* are included.

Key words: *Himalopsyche, H. kuldschensis* group, key, catalogue, India.

Новый вид рода *Himalopsyche* (Trichoptera, Rhyacophilidae), с определительными таблицами и каталогом индийских видов. Лахвиндер К., Малкиат С. Саини. — Иллюстрированное описание *Himalopsyche schmidi* sp. n. из Гехры (Индия: Химачал-Прадеш), принадлежащий к группе видов *H. kuldschensis*. Включены определительные таблицы самцов и самок и каталог индийских видов *Himalopsyche*.

Ключевые слова: *Himalopsyche*, группа *H. kuldschensis*, таблицы для определения, каталог, Индия.

Introduction

The family Rhyacophilidae is the oldest of extant families in Trichoptera (Morse 1997; Kjer et al., 2001) and is dated to approximately 226 million years (Malm et al., 2013). It was taxonomically revised by Ross (1956) and Schmid (1970). In India, the family is represented by 2 genera: *Rhyacophila* Pictet, 1834 and *Himalopsyche* Banks, 1940.

The genus *Himalopsyche* was described by Banks (1940), with the Tibetan *Rhyacophila tibetana* Martynov, 1930 as its type species. *Himalopsyche* is represented by 50 described species (1 Nearctic, 7 East Palaearctic and 42 Oriental, with 2 of these occurring in both the East Palaearctic and Oriental Regions) (Morse, 2013). Because a large proportion of the species diversity occurs in the Oriental Region (~88 %, Morse, 2013) Schmid (1989) suggested that the genus originated there. Among the 42 species of the Oriental Region, 19 species are recorded from India and its adjoining areas (Morse 2013), which were described by Kimmins (1952, 1 sp.), Martynov (1930, 1935, 1936, 3 spp.), Morton (1900, 1 sp.) and Schmid (1963 in Schmid & Botosaneanu, 1966, 14 spp.) Among these, the males of all species and females of all but *H. biansata* Kimmins, 1952, have been described. Below we describe a previously undescribed species, provide keys to known males and females, and a catalogue of the Indian species.

Material and methods

The specimens were collected from high altitude streams using a 15-watt UV light, powered by a sealed, rechargeable 12-volt battery for 1–3 hours beginning at dusk. The material was killed and preserved in 95 % ethanol with a drop of glycerin. The genitalia were removed with fine-tipped forceps and treated in lactic acid (Blahnik et al., 2007). The morphological terminology follows that of Kimmins (1952) and Schmid & Botosaneanu (1966). The type specimen of species described herein is deposited in the Museum of the Department of Zoology and Environmental Sciences, Punjabi University, Patiala, India (PUPM). Repositories for holotypes of other species include The Natural History Museum, London (BMNH); the Royal Ontario Museum, Toronto, Canada (ROM); Zoological Survey of India, Kolkata (ZSI).

Himalopsyche Banks, 1940

Himalopsyche Banks, 1940: 173–220. Type species: *Rhyacophila tibetana* Martynov. Original designation.

Himalophanes Banks, 1940: 201. Type species: *Himalopsyche* (*Himalophanes*) *anomala* Banks. Original designation.

The diagnostic features of *Himalopsyche* include: metascutellum with spiniferous warts; the venation is similar to that of *Rhyacophila* except forewing veins R and M curve backward so that R_4 and R_5 are on each side of the wing apex; the discoidal cell is open in both fore and hind wings; and the abdomen lacks ventral process.

Schmid & Botosaneanu (1966) divided *Himalopsyche* into two distinct groups (*H. kuldschensis* group and *H. tibetana* group) and five subgroups (*H. kuldschensis*, *H. angnorbui*, *H. navasi*, *H. tibetana* and *H. anomala* subgroups).

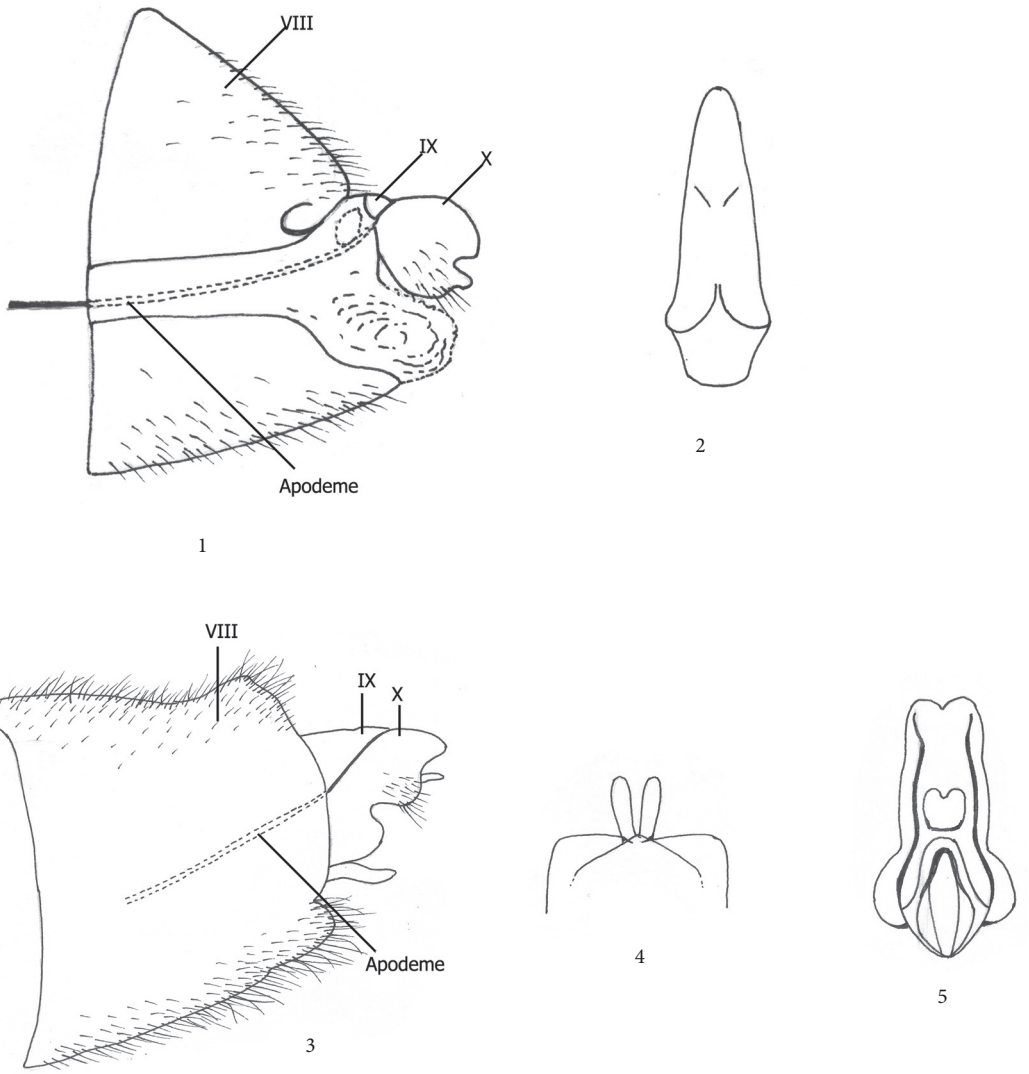

Fig. 1–5, *Himalopsyche* species, female terminalia: 1–2, *H. schmidi* **sp. n.**: 1 — 1eft lateral; 2 — vaginal apparatus, ventral. 3–5, *H. tibetana* (Martynov, 1930), morphological variant: 3 — left lateral; 4 —sternite VIII, ventral; 5 — vaginal apparatus, ventral.

N o t e. VIII — tergum VIII, IX — tergum IX, X — tergum X.

***H. schmidi* sp. n.** (fig. 1–2)

Material. **Holotype** ♀. INDIA: Himachal Pradesh, Gehra, 1200 m, 14.09.2008 (PUPM). **Paratypes**: Same locality as that of holotype, 2 ♀ (PUPM).

Etymology. The species is named in honour of the Late Dr. F. Schmid, who contributed much to the taxonomy of caddisflies of the Indian subcontinent.

Female. Head with antennae 18–19 mm long. Forewings 20–22 mm Wings yellowish; body darker brown than head and legs.

Female abdomen. Segment VIII completely divided into tergite and sternite. Segment IX apodemes extending anteriorly to segment VII. Apex of segment X in lateral view rounded in outline and with indentation. Vaginal apparatus with posterior apex rounded and anterior base truncate.

Diagnosis. The female of this species does not closely resemble any species of *Himalopsyche*, but shows some similarity to *H. dolmasampa* Schmid, 1963. However, these can be separated from each other on the basis of the morphology of the genitalia in lateral view and the vaginal apparatus in ventral view. The apex of segments X in new species is rounded whereas in *H. dolmasampa* the apex is not so rounded. The anterior base of the vaginal apparatus is without a pointed projection in *H. schmidi* **sp. n.** whereas *H. dolmasampa* has a pointed projection. Anterior margin of sternum VIII with slightly raised projection in *H. dolmasampa* where as in *H. schmidi* **sp. n.** the anterior margin is truncate and without any projection.

H. tibetana (Martynov, 1930) (fig. 3–5)

Material. 1 ♀. INDIA: Sikkim, Lachen, 3200 m, 24.05.2011, collectors Parey and Pandher; deposited in PUPM.

Female. Head with antennae 23 mm long. Forewings 28 mm Body brown and wings pale yellow with dark brown patches.

Female abdomen. Segment VIII in lateral view with dorsal margin slightly concave, ventral margin with very slight subapical constriction, and with sinuous fingerlike apicoventral lobes; in ventral view triangular and with pair of fingerlike apicoventral lobes blunt apically. Segment IX triangular in lateral view; lateral apodemes extending anteriorly to basal 1/3rd of segment VIII. Vaginal apparatus in ventral view with slight indentation apically.

Remarks. The female is similar to *H. tibetana* (Martynov, 1930), from which it is distinguished by the apex of segment VIII which in ventral view is completely divided into lobes, but which in *H. tibetana* is divided only up to the middle of the lobes; the vaginal apparatus has an indentation at its apex whereas the apex is complete and without any indentation in *H. tibetana*. Because of lack of sufficient material and the differences given above we hesitate to describe this as a new species on the basis of this female specimen, and prefer to take it as a variant of *H. tibetana*.

Key to species groups of genus *Himalopsyche* Banks, 1940

1.	Males.	2
—	Females.	3
2.	Inferior appendages each with one articulation.	*H. kuldschensis* group
—	Inferior appendages each with two articulations.	*H. tibetana* group
3.	Segment VIII partly or completely divided into tergum and sternum.	*H. kuldschensis* group
—	Segment VIII simple and undivided.	*H. tibetana* group

***H. kuldschensis* group**

According to Schmid & Botosaneanu (1966) this group contains species with characters with symmetrical male anterior claws, male apicodorsal lobe of segment IX present, male preanal appendages small, male anal sclerite long and mobile, phallic apparatus complete, and male maxillary palps thicker than in species of the *H. tibetana* group.

Subgroups of the *H. kuldschensis* group

This group has been further divided into two subgroups which can be easily separated from each other.

1. Males. 2
— Females. 3
2. Preanal appendages present. ..... *H. kuldschensis* subgroup
— Preanal appendages absent. ..... *H. angnorbui* subgroup
3. Segment VIII completely divided into tergum and sternum. ..... *H. kuldschensis* subgroup
— Segment VIII partly divided into tergum and sternum. ..... *H. angnorbui* subgroup

Indian species of the *H. kuldschensis* subgroup

This subgroup includes 9 Indian species: *H. bhagirathi* Schmid, 1963; *H. dolmasampa* Schmid, 1963; *H. gyamo* Schmid, 1963; *H. lungma* Schmid, 1963; *H. malenanda* Schmid, 1963; *H. schmidi* **sp. n.**; *H. todma* Schmid, 1963; *H. yatrawalla* Schmid, 1966, and *H. yongma* Schmid, 1963. The male of *H. schmidi* **sp. n.** is unknown.

Key to Indian species of the *H. kuldschensis* subgroup

1. Males. 2
— Females. 9
2. Inferior appendages with terminal part not globose (spherical). 3
— Inferior appendage with terminal part of globose. 5
3. Anal sclerite apically bifid in dorsal view. ..... *H. todma* Schmid, 1963
— Anal sclerite apically complete in dorsal view. 4
4. Segment X with median lobes almost completely fused; anal sclerite with long root invaginated to half of segment IX. ..... *H. dolmasampa* Schmid, 1963
— Segment X with median lobes fused to 2/3rds of their length; anal sclerite with short root not invaginated into segment IX. ..... *H. malenanda* Schmid, 1963
5. Segment IX large, forming roof over segment X. ..... *H. bhagirathi* Schmid, 1963
— Segment IX small, not forming roof over segment X. 6
6. Phallic parameres present. 7
— Phallic parameres absent. 8
7. Phallic parameres with strong apical spines. ..... *H. yongma* Schmid, 1963
— Phallic parameres without such spines. ..... *H. yatrawalla* Schmid, 1966
8. Segment X with each paired dorsal lobe thin and fingerlike. ..... *H. lungma* Schmid, 1963
— Segment X with each paired dorsal lobe almost fused. ..... *H. gyamo* Schmid, 1963
9. Segment VIII with patch of small thick setae near posterior margin. ..... *H. malenanda* Schmid, 1963
— Not as above. 10
10. Posterior apex of vaginal apparatus indented. ..... *H. todma* Schmid, 1963
— Posterior apex of vaginal apparatus complete. 11
11. Vaginal apparatus as wide as long. ..... *H. bhagirathi* Schmid, 1963
— Vaginal apparatus longer than wide. 12
12. Vaginal apparatus sword-shaped. 13
— Vaginal apparatus not sword-shaped. 14
13. Apex of genitalia rounded in shape; base of vaginal apparatus without pointed projections. ..... *H. schmidi* sp. n.
— Apex of genitalia elongate in shape; base of vaginal apparatus with pointed projection. ..... *H. dolmasampa* Schmid, 1963
14. Segment IX with apodemes extending anteriorly to segment VII. ..... *H. gyamo* Schmid, 1963
— Segment IX apodemes extending anteriorly to middle of segment VIII. 15
15. Anterior margin of segment VIII with small projection. 16
— Anterior margin of segment VIII without projection. ..... *H. lungma* Schmid, 1963
16. Apex of segments X truncate. ..... *H. yongma* Schmid, 1963
— Apex of segments X rounded. ..... *H. yatrawalla* Schmid, 1966

Indian species of the *H. angnorbui* subgroup

This subgroup includes only two Indian species: *H. amitabha* Schmid, 1966, and *H. angnorbui* Schmid, 1963.

Key to Indian species of the *H. angnorbui* subgroup

1. Males. 2
— Females. 3
2. Lobes of segment X extending only slightly beyond dorsomesal lobe of segment IX; phallic parameres simple. ..... *H. amitabha* Schmid, 1966
— Lobes of segment X extending considerably beyond dorsomesal lobe of segment IX; phallic parameres each trifid, with three branches unequal. ..... *H. angnorbui* Schmid, 1963
3. Lower end of posterior margin of segment VIII in lateral view with concavity and anterior end of segment VIII without any projection. ..... *H. amitabha* Schmid, 1966
— Lower end of posterior margin of segment VIII in lateral view without concavity and anterior end of segment VIII with triangular projection. ..... *H. angnorbui* Schmid, 1963

H. tibetana group

This group possesses characters such as inferior appendages each biarticulated, anterior claws of male asymmetrical, segment X small, preanal appendages large and free, anal sclerite small and maxillary palps slender.

Key to Indian subgroups of the *H. tibetana* group

This group is divisible into three subgroups which can be easily set aside from one another on the basis of some features of the genitaliic attributes.

1. Males. 2
— Females. 4
2. Preanal appendages slender. 3
— Preanal appendages oval. ..... *H. navasi* subgroup
3. Inferior appendages 2-segmented, basal segment long and broad at base, constricted to slender about midway, terminal segment short. ..... *H. tibetana* subgroup
— Basal segment and terminal segment of inferior appendage almost of same breadth and basal segment not constricted. ..... *H. anomala* subgroup
4. Sternite VIII with ventral lobe. 5
— Sternite VIII without ventral lobe. ..... *H. navasi* subgroup
5. Sternite VIII with short ventral lobe; long setae absent. ..... *H. tibetana* subgroup
— Sternite VIII with long ventral lobe; long setae present. ..... *H. anomala* subgroup

Indian species of the *H. navasi* subgroup

This subgroup includes three species which are recorded from the Indian area: *H. horai* (Martynov, 1936), *H. lanceolata* (Morton, 1900) and *H. lepcha* Schmid, 1963.

Key to Indian species of the *H. navasi* subgroup

1. Males. 2
— Females. 4
2. Inferior appendages with terminal and basal segments almost equally long. ..... *H. lepcha* Schmid, 1963
— Inferior appendages with terminal segment shorter than basal segment. 3
3. Inferior appendages with terminal segment not visible in lateral view. ..... *H. horai* (Martynov, 1936)
— Inferior appendages with terminal segment visible in lateral view. ..... *H. lanceolata* (Morton, 1900)
4. Segment VIII with posterior margin tapering obliquely. 5
— Segment VIII with posterior margin not tapered obliquely. ..... *H. lepcha* Schmid, 1963
5. Sternite VIII each with lateral hair-lined, hemispherical depression. ..... *H. horai* (Martynov, 1936)
— Sternite VIII without lateral depressions. ..... *H. lanceolata* (Morton, 1900)

Indian species of the *H. tibetana* subgroup

There are two Indian species in this subgroup: *H. biansata* Kimmins, 1952 and *H. tibetana* (Martynov, 1930). The female of *H. biansata* is unknown.

Key to Indian species of the *H. tibetana* subgroup

1. Males. 2
— (Female) Apex of sternum VIII in ventral view divided to middle and posterior apex of vaginal apparatus without indentation. ..... *H. tibetana* (Martynov, 1930)
2. Tergite with outer branch of lateral lobe foliate; apex acute in lateral view. ..... *H. tibetana* (Martynov, 1930)
— Tergite with outer branch blunt and spatulate towards apex in lateral view. ..... *H. biansata* Kimmins,1952

Indian species of *H. anomala* subgroup

This subgroup includes four species from India: *H. digitata* (Martynov, 1935); *H. hierophylax* Schmid, 1966; *H. maitreya* Schmid, 1963 and *H.* sp. (unnamed) Schmid & Botosaneanu, 1966. The male of *H.* sp. (unnamed) Schmid & Botosaneanu, 1966 is presently unknown.

Key to Indian species of the *H. anomala* subgroup

1. Males. 2
— Females. 4
2. In genitalia, preanal appendages each bifid. 3
— In genitalia, preanal appendages not bifid. ..... *H. maitreya* Schmid, 1963
3. Segment X with pointed lobes in dorsal view. ..... *H. digitata* (Martynov, 1935)
— Segment X with rounded lobes in dorsal view. ..... *H. hierophylax* Schmid, 1966
4. Segment VIII with cylindrical ventral lobe. 5
— Segment VIII with flat ventral lobe. 6
5. Segment VIII with concave ventral plate. ..... *H. digitata* (Martynov, 1935)
— Segment VIII with ventral plate not concave. ..... *H. hierophylax* Schmid, 1966
6. Vaginal apparatus at anterior end with indentation. ..... *H. maitreya* Schmid, 1963
— Vaginal apparatus at anterior end without indentation. ..... *H.* sp. (unnamed) Schmid & Botosaneanu, 1966.

Species catalogue

1. *Himalopsyche amitabha* Schmid, 1966.
   H. amitabha Schmid in Schmid & Botosaneanu, 1966: 148, pl. III,fig. 4–8, ♂, ♀;
   "Sikkim: Tanggu, 5600 m" (ROM, ♂).
   Distribution: India (Sikkim).

2. *Himalopsyche angnorbui* Schmid, 1963.
   H. angnorbui Schmid, 1963: 206–208, fig.1–4, ♂;
   "Uttarakhand: Pauri Garhwal, 1800 m" (ROM, ♂).
   Distribution: India (Himachal Pradesh, Sikkim, Uttarakhand).
   Schmid & Botosaneanu, 1966: 147 (reported from Sikkim and associated female with male).
   Material examined: INDIA: Himachal Pradesh: Marhi, 2700 m, 08.08.2008, 6 ♀.

3. *Himalopsyche bhagirathi* Schmid, 1963.
   H. bhagirathi Schmid, 1963: 209–210, fig. 6–7, ♂;
   "Uttarakhand: Pauri Garhwal, 1800 m" (ROM, ♂).
   Distribution: India (Uttarakhand).
   Schmid & Botosaneanu, 1966: 142–143 (associated female with male).
   Material examined: INDIA: Uttarakhand: Gobind Dham, 3500 m, 22.06.2008, 2 ♀.

4. *Himalopsyche biansata* Kimmins, 1952.
H. biansata Kimmins, 1952: 351–352, fig. 4, ♂;
"Tibet: Yatung, 1500 m"(BMNH, ♂).
Distribution: India (Sikkim), Bhutan, Tibet.
Schmid & Botosaneanu, 1966: 148–149 (reported from Sikkim).
Malicky 2007: 494 (reported from Bhutan).

5. *Himalopsyche digitata* (Martynov, 1935).
Rhyacophila digitata Martynov, 1935: 102–103, fig. 8, ♂;
"West Bengal: Darjeeling district, 1600 m" (ZSI, ♂)
Himalopsyche digitata (Martynov): Banks 1940: 197 (New Combination).
Distribution: India (Arunachal Pradesh, Sikkim, Uttarakhand, West Bengal), Bhutan, Nepal.
Schmid & Botosaneanu, 1966:149 (associated female with male and reported from Sikkim, Uttarakhand, Nepal).
Malicky 2006: 241–264 (reported from Nepal).
Malicky 2007: 494 (reported from Bhutan).
Material examined: INDIA: Uttarakhand: Pingla Pani, 1300 m, 11.06.2011, 3 ♂; Chopta, 2700 m, 13.06.2009, 1 ♂, 2 ♀; Chopta, 2700 m, 18.06 .2010, 1 ♂; Arunachal Pradesh: Lumla, 2300 m, 15.05.2011, 5 ♀; Bomdila, 2400 m, 03.10.2010, 1 ♀; Sikkim: Lachen, 3200 m, 24.05.2011, 5 ♂, 3 ♀.

6. *Himalopsyche dolmasampa* Schmid, 1963.
H. dolmasampa Schmid, 1963: 212–213, fig. 11–14, ♂;
"Sikkim: Tangshing, 4300 m" (ROM, ♂).
Distribution: India (Sikkim, Uttarakhand), Nepal.
Schmid & Botosaneanu, 1966: 144–145 (reported from Uttarakhand, Nepal and associated female with male).
Malicky 2006: 241–264 (Reported from Nepal).

7. *Himalopsyche gyamo* Schmid, 1963.
H. gyamo Schmid, 1963: 218–220, fig. 23–24, ♂;
"Sikkim: Tangshing, 4300 m" (ROM, ♂).
Distribution: India (Sikkim), Nepal.
Schmid & Botosaneanu, 1966: 145–146 (reported from Nepal and associated female with male).

8. *Himalopsyche hierophylax* Schmid, 1966.
H. hierophylax Schmid in Schmid & Botosaneanu, 1966: 150–151, pl. IV, fig. 8–9, ♂;
"Uttarakhand: Pauri Garhwal, 1800 m" (ROM, ♂)
Distribution: India (Uttarakhand).

9. *Himalopsyche horai* (Martynov, 1936).
Rhyacophila pallida Martynov, 1935: 100–102, fig. 7, ♂ (pre-occupied by Mosely 1930: 149);
"Himachal Pradesh: Punj-Pul Nullah, 2200 m" (ZSI, ♂).
Rhyacophila horai Martynov, 1936: 306 (Replacement name).
Himalopsyche horai (Martynov): Banks 1940: 197 (new combination).
Distribution: India (Arunachal Pradesh, Himachal Pradesh, Sikkim and Uttarakhand), Bhutan, Nepal.
Schmid & Botosaneanu, 1966: 152 (reported from Arunachal Pradesh, Sikkim and Uttarakhand).
H. phedongensis Kimmins, 1952: 356–357 (synonymized by Schmid & Botosaneanu, 1966: 152).
Malicky 2006: 241–264 (reported from Nepal).
Malicky 2007: 494 (reported from Bhutan).
Material examined: INDIA: Arunachal Pradesh: Tato, 1700 m, 28.04.2010, 1 ♂; Uttarakhand: Hanuman Chatti, 2200 m, 25.09.2008, 4 ♂; Shyna Chatti, 2000 m, 27.09.2008, 1 ♂; Munsiyari, 2200 m, 20.06.2011, 1 ♂.

10. *Himalopsyche lanceolata* (Morton, 1900).
Rhyacophila lanceolata Morton, 1900: 2–3, pl. I, fig.1–4, ♂;
"Meghalaya: Khasi hills, 1500 m" (BMNH, ♂).
Himalopsyche lanceolata (Morton): Banks 1940: 197 (new combination).
Distribution: India (Manipur and Meghalaya).
Kimmins 1952: 354–356 (mounted holotype and allotype as microscope preparations).
Schmid & Botosaneanu, 1966: 151–152 (reported from Manipur).

11. *Himalopsyche lepcha* Schmid, 1963.
H. lepcha Schmid, 1963: 222–223, fig. 27–29, ♂;
"West Bengal: Bara Hata, 1700 m" (ROM, ♂).
Distribution: India (Sikkim and West Bengal), Bhutan.
Schmid & Botosaneanu, 1966: 152 (reported from Sikkim and associated female with male).
Malicky 2007: 494 (reported from Bhutan).
Material examined: INDIA: Sikkim: Lachen, 3200 m, 24.05.2011, 4 ♀.

12. *Himalopsyche lungma* Schmid, 1963.
H. lungma Schmid, 1963: 217–218, fig. 21–22, ♂;
"Uttarakhand: Pauri Garhwal, 1800 m" (ROM, ♂).
Distribution: India (Uttarakhand).
Schmid & Botosaneanu, 1966: 145 (associated female with male).

13. *Himalopsyche maitreya* Schmid, 1963.
H. maitreya Schmid, 1963: 220–221, fig. 25–26, ♂;
"Uttarakhand: Pauri Garhwal, 1800 m" (ROM, ♂).
Distribution: India (Uttarakhand), Nepal.
Malicky 2006: 241–264 (reported from Nepal)

14. *Himalopsyche malenanda* Schmid, 1963.
H. malenanda Schmid, 1963: 210–212, fig. 8–10, ♂;
"Sikkim: Tangshing, 4300 m" (ROM, ♂).
Distribution: India (Arunachal Pradesh, Sikkim and Uttarakhand), Bhutan, Nepal.
Schmid & Botosaneanu, 1966: 146 (reported from Arunachal Pradesh, Uttarakhand, Sikkim, Nepal and associated female with male).
Malicky 2006: 241–264 (reported from Nepal).
Malicky 2007: 492, 494 (reported from Bhutan).
Material examined: INDIA: Uttarakhand: Badrinath, 3400 m, 22.06.2011, 2 ♂.

15. *Himalopsyche schmidi* sp. n.

16. *Himalopsyche tibetana* (Martynov, 1930).
Rhyacophila tibetana Martynov, 1930: 65–67, fig. 1–2, ♂, ♀;
"Tibet: Yatung, 1500 m" (BMNH, ♂).
Himalopsyche tibetana (Martynov): Banks 1940: 197 (new combination).
Distribution: India (Sikkim and Uttarakhand), Bhutan, Nepal, Tibet.
Kimmins 1952: 348–351 (Martynov's paratype described).
Schmid & Botosaneanu, 1966: 148 (reported from Uttarakhand, Sikkim and Nepal).
Schmid 1975: 77–86 (reported from Bhutan).
Malicky 2006: 241–264 (reported from Nepal).
Material examined: INDIA: Sikkim: Lachen, 3200 m, 24.05.2011, 1 ♀.

17. *Himalopsyche todma* Schmid.
H. todma Schmid, 1963: 213–215, fig. 15–18, ♂;
"Uttarakhand: Pauri Garhwal, 1800 m" (ROM, ♂).
Distribution: India (Uttarakhand, Jammu & Kashmir & Himachal Pradesh).
Schmid & Botosaneanu, 1966: 145 (female described and associated with male).
Material examined: INDIA: Jammu and Kashmir: Sonmarg, 3000 m, 26.07.2011, ♀; Himachal Pradesh: Losar, 4200 m, 22.08.2008, 2 ♂; Chhatradu, 3500 m, 21.08.2008, 6 ♂, 1 ♀; Marhi, 2700 m, 08.08.2008, 2 ♂; Kaza, 3000 m, 24.08.2008, 1 ♂, 1 ♀.

18. *Himalopsyche yatrawalla* Schmid, 1966.
H. yatrawalla Schmid in Schmid & Botosaneanu, 1966: 143–144, pl. I, fig. 17–20, ♂; pl. II fig. 3–4, ♀;
"Uttarakhand: Pauri Garhwal, 1800 m" (ROM, ♂).
Distribution: India (Uttarakhand).

19. *Himalopsyche yongma* Schmid, 1963.
H. yongma Schmid, 1963: 215–217, fig. 19–20, ♂;
"Sikkim: Tangshing, 4300 m" (ROM, ♂).
Distribution: India (Sikkim).
Schmid & Botosaneanu, 1966: 145 (associated female with male).

20. *Himalopsyche* sp. (unnamed) Schmid, 1966.
H. sp. (unnamed) Schmid & Botosaneanu, 1966: 151, pl. IV, fig. 13–15, ♀;
"Sikkim: Ramtang, 4700 m" (ROM, ♀).
Distribution: India (Sikkim).

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