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## Four new species of *Noeetomima* Enderlein (Diptera: Lauxaniidae), with a key to world species

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### Abstract

The following four species are described as new to science: *Noeetomima chinensis* **sp. nov.** (China), *N. jinpingensis* **sp. nov.** (China, Nepal), *N. tengchongica* **sp. nov.** (China) and *N. yunnanica* **sp. nov.** (China). The species *Noeetomima aberrans* Shatalkin and *N. nepalensis* Stuckenberg are newly recorded for Japan and India, respectively, and the male genitalia for *N. thaiensis* Sasakawa are described and illustrated for the first time. A key to separate world species is presented, as is a detailed checklist of all species.

**Key words:** Diptera, Lauxaniidae, *Noeetomima*, new species

### Introduction

The genus *Noeetomima* Enderlein, 1937 (Diptera: Lauxaniidae) was described for *N. radiata* Enderlein from Charbin, Manchuria (=Harbin, Heilongjiang Province, northeast China). The next reference to this genus and species was in the key of Stuckenberg (1971a), with comments regarding the morphology of two new species that he ultimately described in Stuckenberg (1971b), namely *N. parva* Stuckenberg and *N. nepalensis* Stuckenberg from Queensland, Australia and Nepal, respectively. For *N. nepalensis*, a figure of the wing was presented in both Stuckenberg papers (1971a, 1971b), with figures of the wing for the other two species in Stuckenberg (1971b), where he also presented figures of the heads of the two new species, and male genitalia for *N. parva*. *Noeetomima nepalensis* was known only from the female. Stuckenberg (1971a) also presented lateral and dorsal views of the head of *N. radiata*. Sasakawa (1987) also described a new species from the female only, namely *N. thaiensis* Sasakawa, providing a figure of the wing. Kim (1994) treated the Australian species of the genus, providing figures of both male genitalia and female terminalia for *N. parva* and his new species *N. decora* Kim, and habitus and head illustrations for *N. decora*. Kim (1994) also expanded the known distribution of *N. parva* to include other states in eastern Australia. Shatalkin (1992) treated the Palearctic species, recording *N. radiata* from the Russian Far East, and describing two new species from Kunashir Island in the (disputed) southern Kuril Islands, namely *N. aberrans* Shatalkin and *N. fulgens* Shatalkin, the former of which was described from the female only. Shatalkin (1992) provided figures of the wings for the three species he treated, but gave no genitalic illustrations. Shatalkin (2000) gave a key (translated into English by Schacht *et al.* (2004)) for the three Palearctic species, repeating the wing figures from 1992, and providing a male genitalic illustration for *N. radiata*.

The first author to consider the subfamily placement of *Noeetomima* was Stuckenberg (1971a), who placed the genus in the Lauxaniinae. The Oriental and Palearctic catalogs (Shewell, 1977; Papp, 1984) continued with this placement, as did Sasakawa (1987), but Evenhuis & Okadome (1989) treated the genus in the Homoneurinae, which was followed by Kim (1994). Shatalkin (1992, 2000) gave no comments regarding subfamily placement, but Papp & Shatalkin (1998) treated it as Lauxaniinae in the key to genera. Kim (1994) included the genus in a phenetic analysis finding it close to *Trypetisoma* Malloch (which is itself only dubiously a homoneurine), which

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## APPENDIX. Checklist of the *Noeetomima* of the world.

- Noeetomima aberrans* Shatalkin, 1992: 79. Type locality: Russia (disputed), Kuril Islands, Kunashir Island, near Mendeleev volcano. Type: holotype ♀ (ZMUM). Palaearctic Region: Japan (Hokkaido), Russia (South Kuril Islands).
- Noeetomima chinensis* sp. nov. Type locality: China, Zhejiang Province, Longquan, Fengyangshan National Nature Reserve, Huangmaojian. Type: holotype ♂ (CAUC). Oriental Region: China (Guizhou, Zhejiang).
- Noeetomima decora* Kim, 1994: 337. Type locality: Australia, New South Wales, Coffs Harbour. Type: holotype ♂ (ANIC). Australian Region: Australia (New South Wales, Queensland).
- Noeetomima fulgens* Shatalkin, 1992: 81. Type locality: Russia (disputed), Kuril Islands, Kunashir Island, near Mendeleev volcano. Type: holotype ♂ (ZMUM). Palaearctic Region: Russia (South Kuril Islands).
- Noeetomima jinpingensis* sp. nov. Type locality: China, Yunnan Province, Jinping, Yakou. Type: holotype ♂ (CAUC). Oriental Region: China (Yunnan), Nepal (Arun Valley).
- Noeetomima nepalensis* Stuckenberg, 1971b: 24. Type locality: Nepal, Ulleri. Type: holotype ♀ (BMNH). Oriental Region: India (Meghalaya), Nepal (Sikha, Ulleri).
- Noeetomima parva* Stuckenberg, 1971b: 27. Type locality: Australia, Queensland, Brisbane. Type: holotype ♀ (AMSA) [note, Stuckenberg (1971b) indicated University of Queensland]. Australian Region: Australia (Australian Capital Territory, New South Wales, Queensland).
- Noeetomima radiata* Enderlein, 1937: 73. Type locality: Charbin, Manchuria [=Harbin, Heilongjiang Province, China]. Type: holotype ♂, ZMHB. Palaearctic Region: China (Heilongjiang), Russia (Primorye and Khabarovsk Region).
- Noeetomima tengchongica* sp. nov. Type locality: China, Yunnan Province, Tengchong, Tengchong Village. Type: holotype ♂ (CAUC). Oriental Region: China (Yunnan).
- Noeetomima thaiensis* Sasakawa, 1987: 1. Type locality: Thailand, Chiang Mai, Doi Inthanon. Type: holotype ♀ (UOPJ). Oriental Region: Thailand.
- Noeetomima yunnanica* sp. nov. Type locality: China, Yunnan Province, Jinping, Fenshuiling Protection Station. Type: holotype ♂ (CAUC). Oriental Region: China (Yunnan).