SCIENTIFIC NOTE

SIGNIFICANT RANGE EXTENSIONS FOR KANGELLA AND VIETNAMELLA (EPHEMEROPTERA: EPHEMERELLIDAE, VIETNAMELLIDAE)


Recent emphasis on the Oriental Ephemeroptera fauna (e.g., Sites et al. 2001, Soldán 2001) has expanded the known geographic range of several families and genera, especially in China and Thailand (e.g., Zhou and Zheng 2001; Parnrong et al. 2002; Zhou et al. 2003, 2004; Zhou 2004). Our examination of extensive Ephemeroptera collections from Thailand has yielded new records and significant range extensions for certain paenfotc mayflies (McCafferty and Wang 2000), reported below. At this time, our material examined is deposited in the Enns Entomology Museum, Columbia, Missouri, USA; however, some specimens will be deposited in Thailand with the National Science Museum, Pathum Thani; and the Royal Forestry Department, Bangkok. Images of collecting localities (“L” numbers) in Thailand are available online, via a locality image database at the Enns Entomology Museum website.

Kangella brocha (Kang and Yang). The monospecific genus Kangella Sartori (2004) has been reported only from Taiwan (Kang and Yang 1995, Soldán 2001), and it represents the single Ephemeroptera genus that has been considered endemic to the island (Soldán and Yang 2003). Our new records, however, indicate that the genus has a broader range of distribution and that no mayfly genera are endemic to Taiwan. Our specific identification was verified by comparison to a paratype of K. brocha. Kangella larvae are differentiated from other Ephemeroellidae by having the length of the antennae greater than one-half the body length, the mandibles greatly elongate, and the labrum elongate and trapezoidal. The alate stages are unknown.


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**Vietnamella** spp. The genus *Vietnamella* Tshernova (1972) has been reported from Vietnam and southern China (reviewed by McCafferty and Wang 1997, Soldán 2001). The record from Prachuap Khiri Khan Province listed below extends the range of this genus south onto the Malay peninsula. *Vietnamella* larvae are distinguished easily from other pannote mayflies (McCafferty and Wang 2000) by having long cephalic horns, enlarged forefemora with a serrate ventral (leading) margin, and gills on abdominal segments 1–7. Alate stages are identifiable by cephalic horn vestiges, wing venation, and the structure of the male genitalia (You and Su 1987, Wang and McCafferty 1995). We have not assigned specific identifications to the specimens we examined because the taxonomy of species in this genus remains somewhat dubious, as indicated and discussed by McCafferty and Wang (1997) and Soldán (2001).


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**LITERATURE CITED**


