**Fig. 2.** Habitus of *Eoptychopterina baisica* Kalugina, specimen PIN, no. 4210/5397, male.

specimens with preserved genitalia have been described. In only two species from the same Daya locality, *E. daiensis* and *E. petri* sp. nov., an elongate sclerotized ovipositor (Fig. 3) resembling that of the extant Ptychopteridae and of other eoptychopterid genera (*Eoptychoptera* Handlirsch, 1906 and *Proptychopterina* Kalugina, 1985) has been found. In several other species (*E. rohdendorphi, E. transbaicalica, E. elenae*, and *E. abbreviata*), the ovipositor is short and sometimes not sclerotized (Fig. 4).

It is surprising to see such different female genitalia in congeneric species, because, in each living genus of the family Ptychopteridae, the ovipositor type is uniform (although the family is small). However, some genera of large nematocerous families display considerable variation in the ovipositor structure. In the genus *Hexatoma* Latr. (Limoniidae), even within the same subgenus, *Eriocera* Macq., the ovipositor is long and sclerotized in generalized species and short and fleshy with strongly reduced cerci in specialized ones (Savchenko, 1989). Similar diversity in the ovipositor structure was also recorded in the Tipulidae, i.e., in *Tipula* L. The ovipositor in several species of this genus "because of the shortening of some sclerites constituting it…, is entirely modified and sometimes superficially resembles rather the male hypopygium" (Savchenko, 1983, p. 84, text-fig. 40). This is usually associated with a specialized oviposition mode and caused by a decrease in the load on the ovipositor. For example, the ovipositor is reduced in the *T. fascipennis* Mg. species group (subgenus *Lunatipula* Edw.), as females of these species just drop the eggs onto the soil, not inserting their ovipositor into it.

This analogy is hardly helpful in reconstructing the mode of life of *Eoptychopterina*, because one of the most characteristic features of many *Eoptychopterina* species that have a short ovipositor is the dense pubescence of the wing (Pl. 9, Fig. 5). It is commonly believed that such a cover—composed of hydrophobic macrotrichia, which make the wing blade waterproof—is usually associated in mecopteroid insects with larvae that live in water (Martynova, 1959) rather than soil. Although, in one more nematocerous family, Sciaridae, congeneric species sometimes show glabrous (*Trichosia mediterranea* Mohrig et Kaushke) and densely setose wings (species group *T. hirtipennis* (Zett.) [Mohrig and Kaushke, 1994]). The sciarid larvae "are characterized by various feeding modes, from saproxylophagy to mycetophytophagy"; however, an aquatic mode of life has not yet been recorded (Krivosheina *et al.*, 1987).

Another known case of the ovipositor reduction—some bryobiontic craneflies (e.g., *T. saginata* Bergr.)