

Fig. 3. Species of *Eoptychopterina*: (a) *E. petri* sp. nov., habitus of holotype female; (b) *E. daiensis* Kalugina, habitus of holotype female; and (c) *E. ?daiensis* specimen PIN, no. 3063/1428, male abdomen. Scale bar, 1 mm.

oviposit into loose aquatic moss—would seem to be a much more appropriate analogue. The reduced ovipositor of this species (Savchenko, 1983, text-fig. 95, 2) seems to be identical to that of *E. transbaicalica*. It is interesting that the ovipositor reduction in craneflies is accompanied by a decrease in relative abdomen length. Our material is too scarce to confirm this assumption; however, in the few specimens for which we can calculate the abdomen/thorax length ratio, it is actually higher in species with a normal ovipositor (2.4 in *E. daiensis* and *E. petri* sp. nov.) than in those with a reduced ovipositor (1.6 in *E. transbaicalica* and *E. elenae*).

Therefore, despite the ovipositor diversity, it is reasonable to treat *Eoptychopterina* as a single genus, although of course the possibility remains that we will not be able to diagnose several closely related genera on the basis of their wings, since the wings of the living ptychopterid genera *Bittacomorpha* Westw. and *Bittacomorphella* Alexander differ only in their pubescence patterns. As an aside, the wings of various *Eoptychopterina* species also differ in the development of pubescence, but there is no apparent correlation with the ovipositor type (the ovipositors are similar in *E. rohden-dorphi* with a glabrous wing blade and in *E. abbreviata*

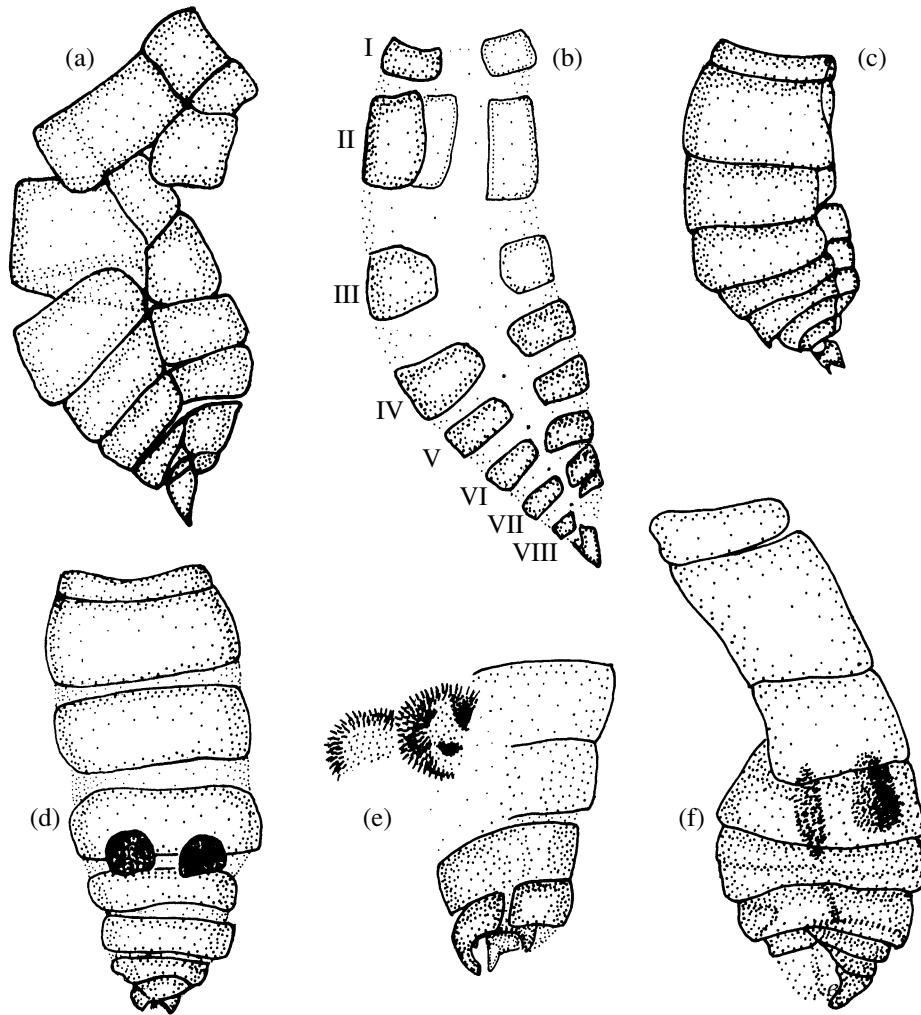


Fig. 4. Abdomen structure in *Eoptychopterina*: (a) *E. karatavica* Lukashevich, specimen PIN, no. 2066/1459, female; (b) *E. rohdendorphi* Kalugina, holotype female; (c) *E. transbaicalica* Kalugina, holotype female; (d) *E. karatavica* Lukashevich, paratype PIN, no. 2066/1692, male; and (e, f) *E. baisica* Kalugina: (e) specimen PIN, no. 4210/5397, male and (f) holotype male.

with a densely pubescent wing). Therefore, despite the obvious difference in the wing pubescence and the structure of female genitalia, it would be premature to divide the genus *Eoptychopterina* into subgenera.

A few words about the abdominal structure are now needed to avoid misinterpretation when numbering its segments. In contrast to many Nematocera, the first tergite in the living Ptychopteridae is not shortened, whereas the second stands out against the remaining gradually shortening tergites. Two explanations are possible, the second tergite is either simply elongated or fused with the third. Such a fusion seems to be confirmed by the presence of only seven well-developed tergites (instead of the usual eight) and of two sternites corresponding to the second tergite of *Ptychoptera* Mg. This homology has been accepted by, e.g., Alexander (1927) and McAlpine (1981). However, we prefer another homology, proposed by Peus (1958) and fol-

lowed by Just (1973) and Krzemiński (1986): the second segment is elongated and its sternite is secondarily subdivided, while the eighth tergite is reduced to a narrow half-ring sclerite but has not been lost. The last sternite is the eighth, as is in all other Nematocera, in this interpretation only. In *Bittacomorpha*, the entire second sternite terminates short of the apex of the corresponding tergite and is followed by an extensive membranous area; this apparently provides additional abdominal mobility (the secondary subdivision of the second sternite is commonly observed, incidentally, in the Diptera, recorded, e.g., in some Limoniidae, such as *Pedicia albivitta* Walk. (Young, 1921, text-figs. 1, 2)).

Despite a quite different, compact rather than elongate, shape of the abdomen in *Eoptychopterina*, the structure of its tergites closely resembles that of the Ptychopteridae (the first is rather short, the second is the longest, and the others gradually shorten). The spe-