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AGNOPHILOGENIA KENNEDY 1940, A JUNIOR SYNONYM OF *PHILOGENIA* SELYS 1862 (ZYGOPTERA: MEGAPODAGRIONIDAE)

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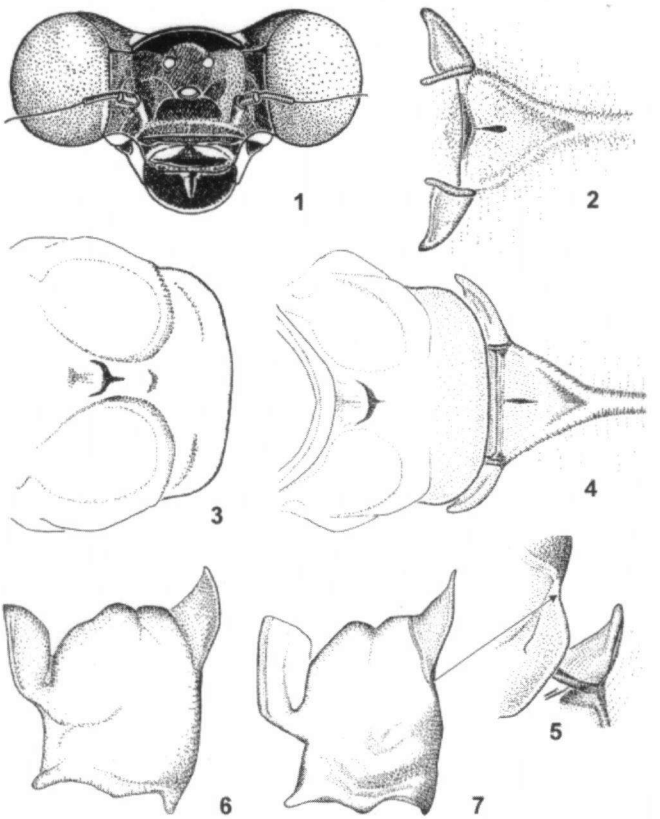
Agnophilogenia Kennedy is shown to be a junior synonym of *Philogenia* Selys based on a comparison of diagnostic characters of the holotype ♀ of its only known sp., *A. monotis*, with those of *Philogenia* spp. An analysis of the described spp. of *Philogenia* suggests that *P. tinalandia* Bick & Bick represents a junior synonym of *P. monotis* (Kennedy). The ♂ holotype of *P. tinalandia* is illustrated and compared with the ♀ holotype of *A. monotis*.

INTRODUCTION

KENNEDY (1940) described *Agnophilogenia monotis* based on a single female specimen collected in northwestern Ecuador (Pichincha prov., Hacienda La Lorena, 12 km E of Santo Domingo de Los Colorados, 550 m). He justified the placement of this species in his new genus based on the presence of a supplementary third antenodal crossvein in the wing costal space. *Philogenia* has two antenodals in the costal space (continuous with crossveins in the subcostal space), whereas *Agnophilogenia* has three (two continuous with subcostal veins and a supplementary third one between them only in the costal space [Fig. 8]). Other diagnostic characters of *Agnophilogenia* he suggested include legs with very long spines (some more than four times as long as the adjacent interspaces), apex of hind femur reaching beyond middle of abdominal segment II, frons rounded, antenna reaching slightly beyond outer contour of compound eye, second antennal segment twice as long as first, labium with a rectangular apical notch, ovipositor with apex at level with apices of cerci, and cerci in lateral view with straight ventral and concave dorsal edge ending in minute almost needle-like apex.

RESULTS AND DISCUSSION

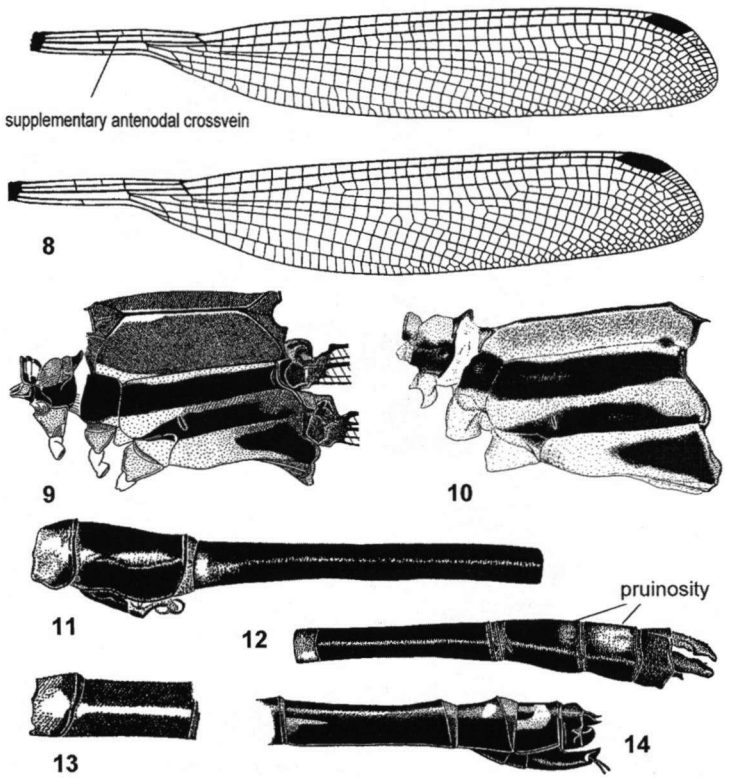
I examined about 100 specimens of 20 species of *Philogenia* deposited at the Museum of Zoology, University of Michigan, MI (UMMZ) and the R.W. Garrison (RWG) collections and concluded that the number of antenodal crossveins in the costal space is not constant. I found a supplementary antenodal crossvein in one to three wings of several specimens of *P. cassandra* Hagen *in* Selys (UMMZ, RWG), *P. terraba* Calvert (RWG), *P. mangosisa* Bick & Bick (UMMZ), and *P.* sp (UMMZ). CALVERT (1924) already mentioned the presence of supplementary antenodal crossveins in *P. cassandra* and *P. cristalina* Calvert, and BICK & BICK (1988) in *P. cassandra.* All possible



Figs 1-7. Holotype female of *Agnophilogenia monotis* and holotype male of *Philogenia tinalandia*: (1) head of *P. monotis*, frontal view (from KENNEDY, 1940); – (2) mesostigmal plates of *P. tinalandia*, dorsal view; – (3) prothorax of *P. tinalandia*, dorsal view; – (4) prothorax and mesostigmal plates of *P. monotis*, dorsal view; – (5) mesostigmal plate of *P. monotis*, dorsolateral view; – (6) prothorax of *P. tinalandia*, lateral view; – (7) prothorax of *P. monotis*, lateral view.

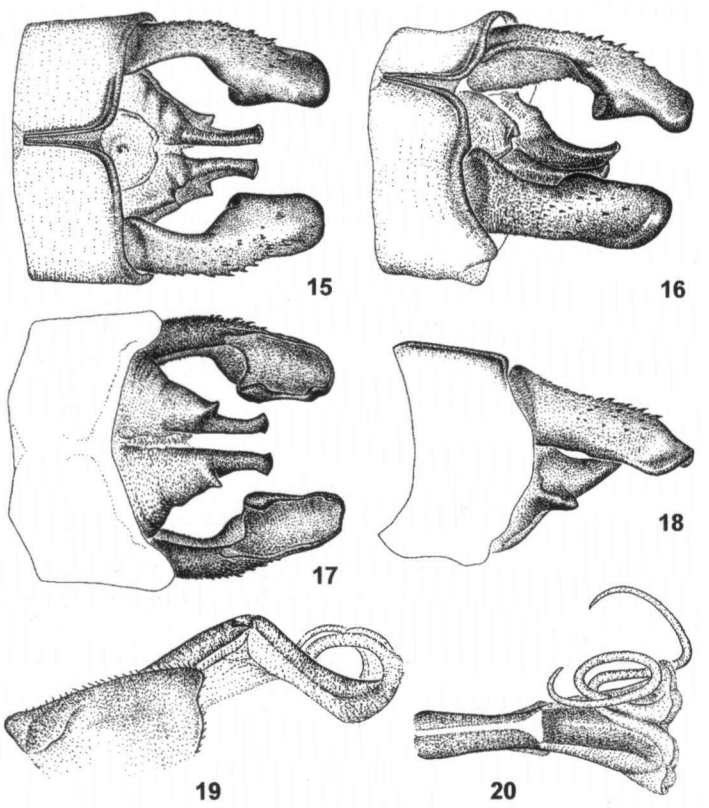
diagnostic characters of *Agnophilogenia* suggested by KENNEDY (1940) are also present in *Philogenia*, and a thorough comparison of the holotype of *A. monotis* with females of several *Philogenia* species did not reveal any consistent difference that could be regarded as generic; color pattern (Figs 1, 9, 13-14), size, shape of prothoracic lobes and mesostigmal plates (Figs 4-5, 7), ovipositor and cerci are all encompassed within the variation range of *Philogenia* (CALVERT, 1924; BICK & BICK, 1988). Because of these reasons, I consider *Agnophilogenia* Kennedy a junior subjective synonym of *Philogenia* Selys and *Philogenia monotis* (Kennedy) a new combination.

Philogenia currently includes 35 species (DUNKLE, 1990) distributed from Costa



Figs 8-14. Holotype female of *Agnophilogenia monotis* and holotype male of *Philogenia tinalandia*: (8) left pair of wings (scan) of *P. monotis*; – (9) thorax of *P. monotis*, lateral view (from KENNEDY, 1940); – (10) thorax of *P. tinalandia*, lateral view; – (11) abdominal segments 1-3 of *P. tinalandia*, lateral view; – (12) abdominal segments 7-10 of *P. tinalandia*, lateral view; – (13) abdominal segments 1-2 of *P. monotis*, lateral view (from KENNEDY, 1940); – (14) abdominal segments 7-10 of *P. monotis*, lateral view (from KENNEDY, 1940).

Rica to Bolivia through Venezuela south along the montane forests of the Andes (BICK & BICK, 1988). *P. cassandra* occurs from Venezuela to Peru but each of the remaining species appears restricted to no more than one country. Only two species, *P. ebona* Dunkle and *P. tinalandia* Bick & Bick, occur on the western slope of the Andes (BICK & BICK, 1988); the same area where the holotype and only known specimen of *Agnophilogenia monotis* was collected. *P. ebona* has been so far found only in northwestern Colombia (DUNKLE, 1986; BICK & BICK, 1988) and *P. tinalandia* at Tinalandia, its type locality (BICK & BICK, 1988). Tinalandia is located 12 km E of Santo Domingo de Los Colorados (0.20°S 79.3°W 762 m) and Hacienda La Lorena, the type locality of *P. monotis*, is located 15 km E of Santo Domingo de Los Colorados (BROWN, 1941). *P. tinalandia* is known only from two males, holotype and paratype (BICK & BICK, 1988), of which I illustrate the caudal appendages and genital ligula



Figs 15-20. Holotype male of *Philogenia tinalandia*. Figs 15-18: caudal appendages: (15) dorsal view; – (16) mediodorsal view; – (17) ventral view; – (18) lateral view. – Figs 19-20: genital ligula: (19) lateral view; – (20) ventral view.

of the holotype in detail (Figs 15-20). Examination of the holotype of *P. tinalandia* revealed that length of hind wing and abdomen, number of postnodal crossveins, color pattern (Figs 10-12), and shape of mesostigmal plates and prothoracic lobes (Figs 2-3, 6) agree well with those of the holotype female of *P. monotis* (Figs 4-5, 7). According to CALVERT (1924) the shape of the prothoracic lobes is different for males and females in some species of *Philogenia* and the same in others. As the specimens of *A. monotis* and *P. tinalandia* were collected only about 3 km apart from each other, and they share similar size, color pattern and shape of prothoracic lobes and mesostigmal plates, it is very likely that they represent female and male sex of the same species. Whether *P. tinalandia* is a junior synonym of *P. monotis* or whether they represent separate species is a question that will be answered once a series including both males and females is collected within the area E of San Domingo de Los Colorados.

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