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## ***Tonyosynthemis*, a new dragonfly genus from Australia (Insecta: Odonata: Synthemistidae)**

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**A b s t r a c t:** *Tonyosynthemis* (type species: *Synthemis claviculata* TILLYARD) is established on characters of adults and larvae.

**K e y w o r d s:** *Tonyosynthemis*, new genus, north-eastern Australia.

### **Introduction**

Affinities of *Synthemis cyanitincta* TILLYARD and *Synthemis claviculata* TILLYARD were discussed by TILLYARD (1910), of *Synthemis ofarrelli* THEISCHINGER & WATSON and both, *S. claviculata* and *S. cyanitincta*, by THEISCHINGER and WATSON (1986).

CARLE (1995) erected the tribe Eusynthemistini with type genus *Eusynthemis* FÖRSTER and included in it also *Choristhemis* TILLYARD and *Austrosynthemis* which he established for *S. claviculata*, *S. cyanitincta* (type species) and *S. ofarrelli*. In general, CARLE'S (1995) view on the Synthemistidae appears to me very sound. Some of my more recent work on adults and particularly larvae does not only support my earlier placement of *Choristhemis barbarae* MOULDS in *Eusynthemis* (THEISCHINGER 1995) but also the close ties of the species included by CARLE in *Austrosynthemis* with *Choristhemis* TILLYARD, as suggested by CARLE (1995). Morphological details of adult *Austrosynthemis cyanitincta* and particularly of the larva of *Austrosynthemis claviculata* (TILLYARD), however, indicate specialisations unique in Synthemistidae. A new genus, *Tonyosynthemis*, based on *A. claviculata*, is therefore established below. A brief diagnosis of *Tonyosynthemis* and a comparative diagnosis of *Austrosynthemis* (as restricted here) are given. The larva of *Tonyosynthemis claviculata* is described for the first time. *Austrosynthemis*, now regarded as monotypic, is considered the sister group of *Tonyosynthemis*.

### ***Tonyosynthemis* gen. nov. (Figs 1-7)**

Type species: *Synthemis claviculata* TILLYARD

Adults (Figs 1-3)

**S i z e:** Medium (hindwing generally longer than 30 mm).

**C o l o u r a t i o n:** Largely black with vivid yellow pattern; wing bases (subcostal space) not blackened.

**A b d o m e n:** Tergum 7 of male ventrally with short hairs and without distal hair-brush

(Fig. 1).

**Male anal appendages:** Apical portion of superior appendages distinctly club-shaped (Fig. 2).

**Female genitalia:** Valves narrow, with laterodistal point; styli well developed (Fig. 3).

**Larvae (Figs 4-7)**

Total length 18.5-19.5 mm.

**Head:** Prementum (Fig. 5) abruptly widening from short narrow base; ligula with median lobe hardly developed; labial palps with 7 dentitions (including very small one next to movable hook) and with 6 larger palpal setae; generally 5 primary premental setae and 6 secondary premental setae; postmentum with mediobasal notch. Postocular lobe (Fig. 6) strongly differentiated, almost bilobed.

**Prothorax:** Pronotal lobe (Fig. 7) strongly developed and with short appressed setae.

**Abdomen:** Two substantial obtuse laterodorsal processes each on segments 4-9 (Fig. 4).

**Species included:** *Synthemis claviculata* TILLYARD, *Synthemis ofarrelli* THEISCHINGER & WATSON.

**Distribution:** North-eastern Australia.

**Name:** in memory of Prof. A. F. L. (Tony) O'Farrell (1917-1997) and Dr. J.A.L. (Tony) Watson (1935-1993), two unforgettable friends and outstanding odonatologists.

### ***Austrosynthemis* CARLE (Figs 8-13)**

**Type species:** *Synthemis cyanitincta* TILLYARD.

**Adults (Figs 8-10)**

**Size:** Rather small (length of hindwing about 25 mm).

**Coloration:** Largely greyish- to blackish brown with very pale bluish pattern; wing bases (subcostal space) distinctly blackened.

**Abdomen:** Tergum 7 of male ventrally with long hairs and with well developed distal hair-brush (Fig. 8).

**Male anal appendages:** Apical portion of superior appendages tapered (Fig. 9).

**Female genitalia:** Valves wide, with subbasal point close to midline; styli generally absent or vestigial (Fig. 10), sometimes moderately developed on one side only, rarely moderately developed on each side.

**Larvae (Figs 11-13)**

**Head:** Postocular lobe not strongly differentiated (Fig. 12).

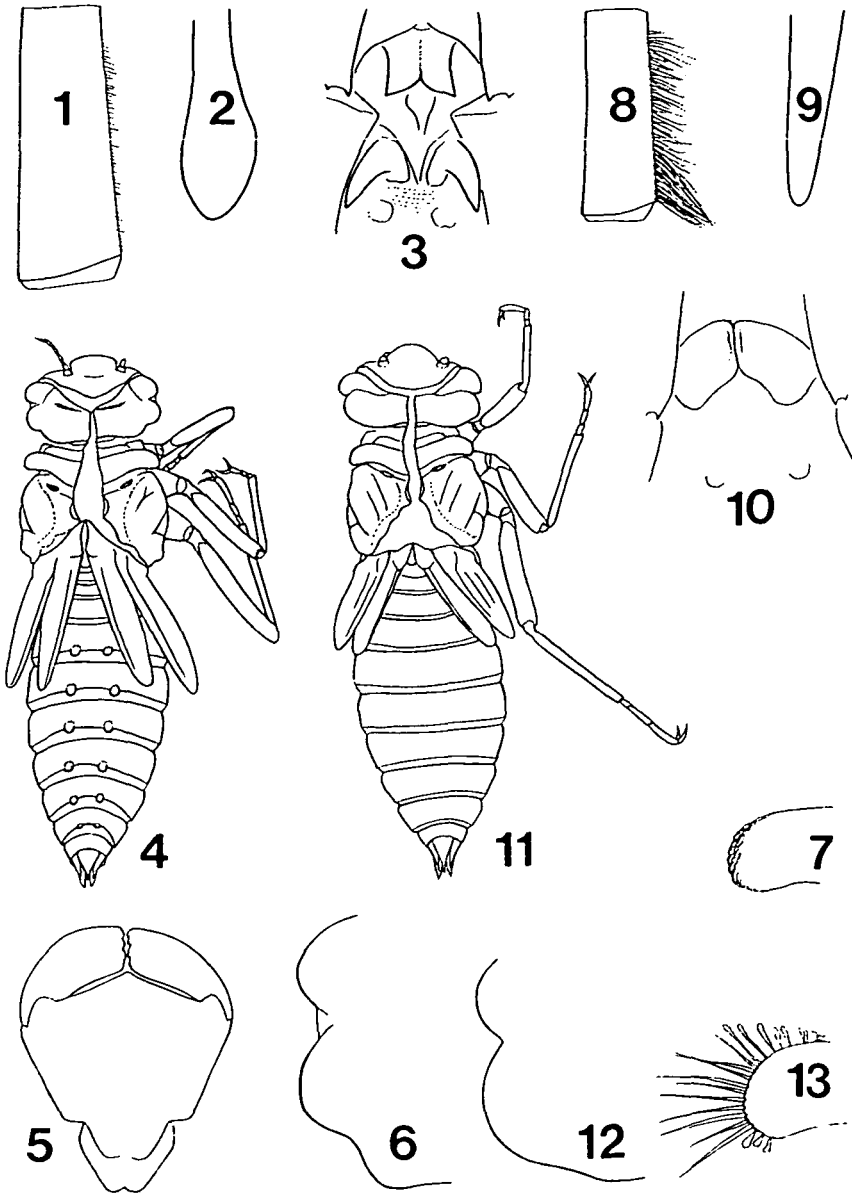
**Prothorax:** Pronotal lobe (Fig. 13) with long prominent setae.

**Abdomen:** Dorsal surface of segments 4-9 smooth without any processes (Fig. 11).

**Species included:** *Austrosynthemis* CARLE is considered in this paper to be monotypic.

**Distribution:** South-western Australia.





**Figs 1-7: *Tonyosynthemis claviculata* (TILLYARD):** 1-3 adults: 1 - tergum 7 of male, lateral aspect; 2 - apical portion of superior anal appendage of male, lateral aspect; 3 - female genitalia, ventral aspect; 4-7: larva: 4 - habitus, dorsal aspect; 5 - labium, ventral aspect; 6 - postocular lobe, dorsal aspect; 7 - pronotal lobe, dorsal aspect. **Figs 8-13: *Austrosynthemis cyanitincta* (TILLYARD):** 8-10 adults: 8 - tergum 7 of male, lateral aspect; 9 - apical portion of superior anal appendage of male, lateral aspect; 10 - female genitalia, ventral aspect; 11-13 larva: 11 - habitus, dorsal aspect; 12 - postocular lobe, dorsal aspect; 13 - pronotal lobe, dorsal aspect.

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