

CONTRIBUTION TO THE STUDY OF AQUATIC
BEETLES (COLEOPTERA).
15. SUBGENERIC CLASSIFICATION OF *PLATYNECTES*
REGIMBART (DYTISCIDAE)

By

T. G. VAZIRANI*

Zoological Survey of India, Calcutta

The genus *Platynectes* was proposed by Regimbart in 1878 to accommodate the following five species.—1. *Agabus decemnotatus* Aube 2. *Agabus spilopterus* Germar 3. *Colymbetes submaculatus* Castelnau 4. *Agabus tasmaniae* Clark 5. *Agabus backewelli* Clark. Since then the number of species assigned to this genus has increased to 34 species, spread over Asia, America, Australia and Islands of the Pacific Ocean.

Guignoy (1946) fixed *Agabus decemnotatus* Aube as the 'Type' species for the genus. Vazirani (1970) studied most of the Oriental species and proposed the division of the genus into 3 subgenera, *Platynectes* (s. str.), *Paraplattynectes* and *Neoplattynectes*. Gueorguiev (1972) in his revision of the genera *Platynectes* Regimbart and *Colymbinectes* Falkenstrom (1936) has split the genus *Platynectes* into four subgenera and transferred three species to the genus *Colymbinectes*. Gueorguiev (1972 : 39) has placed the type species of the genus viz. *decemnotatus* Aube. in the new subgenus *Hypoplattynectes*, while on p. 42 the same species has been cited by him as the 'type species' of the nominal subgenus. It is obvious that the above assignment by Gueorguiev (l.c.) is contrary to the article 44 (a) of the 'International Code of Zoological Nomenclature' as adopted by the Fifteenth International Congress of Zoology at London, in 1961.

Therefore it becomes necessary to review and synthesise the subgenera as proposed by Vazirani (l.c.) and Gueorguiev (l.c.).

The several species mentioned under each subgenus have been adequately redescribed and the material studied clearly mentioned, both by the author (1970) and by Gueorguiev (1972). These species have now been reassigned to the different sub-

*Desert Regional Station, Zoological Survey of India, Jodhpur, Rajasthan

genera in the light of the present review of their position. The author has not actually seen the material referable to these species but has drawn the conclusions from the descriptions given by the author and Gueorguiev as indicated above.

SYSTEMATIC ACCOUNT

Family DYTISCIDAE

Subfamily COLYMBETINAE

Genus **Platynectes** Regimbart (1878)

Subgenus **Platynectes (Platynectes)** Regimbart

Type species.—*Agabus decemnotatus* Aube (*vide* Guignot, 1946).

1878. *Platynectes Regimbart*, *Ann. Soc. ent. Fr.*, Paris (5) 8: 454 (in part).

1972. *Platynectes (Hypoplatynectes)* Gueorguiev, *Izv. Inst. Zool. Mus.*, Sofia, 34: 37.

Diagnosis.—Prosternal process broadly oval, almost broader than long, more or less rounded at apex. Male, parameres strongly curved in the middle.

List of species.—*decemnotatus* Aube, *submaculatus* Castelnau, *nigerrimus* Aube, *unidecimguttatus* Aube, *parananus* Sharp.

Distribution.—South and Central America.

Remarks.—Under article 44(a) the subgenus that contains the type species of a subdivided genus bears the same name as the genus and is termed the nominate subgenus. Since the type-species of *Platynectes*, *Agabus decemnotatus* Aube was placed by Gueorguiev (1972) in his subgenus *Hypoplatynectes*, there is no other alternative but to place his subgenus as a synonym of the nominate subgenus. In the specimens of the type species, as observed by the author (1970) in the Paris Museum, it was found that the metacoxal lines are in complete and do not reach the posterior border of the metasternum. As such this species and perhaps others also, belonging to this subgenus, are closely related to the subgenus *Gueorguievtes*, named and defined below.

Platynectes (Gueorguievtes) nom. nov.

Type species.—*Agabus dissimilis* Sharp, designated here.

1970. *Platynectes (Platynectes)* Vazirani, *Orient. Ins.*, 4: 340 (in part).

1972. *Platynectes (Platynectes)* Gueorguiev, *Izv. Inst. Zool. Mus.*, Sofia, 34: 42.

Diagnosis.—Prosternal process strongly pointed, more or less narrowed anteriorly. Metacoxal lines incomplete anteriorly, not reaching the posterior borders of the metasternum. Male penis asymmetrical, apex always smooth and more or less rounded.

List of species.—*australicus* Gueorguiev, *backewelli* Clark, *buruensis* Zimmermann, *darlingtoni* Gueorguiev, *decastigma* Regimbart, *decempunctatus* Fabr., *deletus* Regimbart, *dissimilis* Sharp, *gagatinus* Lea, *kashmirensis* Balfour-Browne, *monostigma* Hope, *obscurus* Sharp, *ocularis* Lea, *octodecimaculatus* McLeay, *semperi* Regimbart, *tasmaniae* Clark.

Distribution.—Oriental Region, Australian Region and Oceanic Islands of the Pacific.

Platynectes (Carinonectes) nom. nov.

Type-species.—*Colymbetes magellanicus* Babington

1972. *Platynectes* (*Neoplatynectes*) Gueorguiev, *Izv. Inst. Zool. Mus., Sofia*, 34: 34. nec. *Platynectes* (*Platynectes*) Vazirani, 1970.

Diagnosis.—Prosternal process narrow, lanceolate and carinate at least anteriorly or in the middle.

List of species.—*aenescens* Sharp, *limbatus* Sharp, *magellanicus* Babington, *reticulosus* Clark.

Distribution.—Australia.

Remarks.—Gueorguiev (1972) has proposed a new subgenus *Neoplatynectes* to receive the 4 Australian species with carinate prosternal process but the name is preoccupied by *Platynectes* (*Neoplatynectes*) Vazirani (1970)*. Hence a new name has been proposed for this subgenus.

Platynectes (Paraplatynectes) Vazirani*

Type species.—*Platynectes guttula* Regimbart (by original designation).

1970. *Platynectes* (*Paraplatynectes*) Vazirani, *Orient. Ins.*, 4: 342.

1972. *Platynectes* (*Australonectes*) Gueorguiev, *Izv. Inst. Zool. Mus., Sofia*, 34: 55 (type-species, *P. (A.) browni* Gueorguiev).

*Vazirani, 1970, proposed the subgenus *Platynectes* (*Neoplatynectes*) to receive *P. princeps* Regimbart, *P. coriaceus* Regimbart and *P. procerus* Regimbart but Gueorguiev (1972) has transferred these species to *Colymbinectes* Falkenstrom. The author agrees with this arrangement, and hence *Platynectes* (*Neoplatynectes*) Vazirani should be considered as a junior synonym of *Colymbinectes*.

Diagnosis.—Prosternal process lanceolate and flat. Metacoxal lines entire, reaching the posterior border of metasternum.

List of species.—*guttula* Regimbart, *brownei* Gueorguiev.

Distribution.—Australia and China.

Remarks.—Gueorguiev (1972) has proposed the subgenus *Australonectes* with a single species, having the metacoxal lines complete and reaching the posterior border of the metasternum. Vazirani (1970), after examining the type specimens of *P. guttula* Regimbart, also proposed the subgenus *Paraplatynectes*, with a similar condition of the metacoxal lines. But there are differences in the male genitalia of these two species, in one the penis is symmetrical and in the other the penis is asymmetrical. The author feels that subgenera should not be based solely on the genetical characters and therefore proposes the above synonymy.

REVISED KEY TO THE SUBGENERA OF *PLATYNECTES* REGIMBART

(Adopted from Gueorguiev 1972)

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|---|------------------------------------|
| 1 Prosternal process narrow and carinate,
in the middle or anteriorly | <i>Carinonectes</i> nom. nov. |
| Prosternal process broadly oval or
lanceolate plate or feebly convex but
not carinate | 2 |
| 2. Prosternal process rounded at apex.
Male- parameres strongly curved in the
middle, almost sickle shaped | <i>Platynectes</i> (s. str.) |
| Prosternal process pointed and narrow-
ing towards apex. Male- parameres not
curved in the middle | 3 |
| 3. Metacoxal lines effaced anteriorly, not
reaching the posterior border of the
metasternum | <i>Gueorguievtes</i> nom. nov. |
| Metacoxal lines entire, reaching the
posterior borders of the metasternum | <i>Paraplatynectes</i>
Vazirani |

SUMMARY

As a result of the revision of the Oriental species by the author (1970) and that of the world species of the genus *Platynectes* Regimbart by Gueorguiev (1972), it became necessary to review and synthesise the subgenera, proposed

independently by the two authors. *Platynectes* (s. str.) is now restricted to the species from Central and South America along with the nominate species of the genus viz. *decemnotatus* Aube. A new subgenus is proposed for the large number (16) of species occurring in the Oriental, Australian Regions and the Pacific Islands. A new name *Carinonectes* is proposed for the pre-occupied name *Neoplatynectes* Gueorguiev (1972) nec *Neoplatynectes* Vazirani (1970) *Platynectes* (*Australonectes*) Gueorguiev (1972) is considered a synonym of *Platynectes* (*Paraplatynectes*) Vazirani (1970) *Platynectes* (*Neoplatynectes*) Vazirani (1970) is considered a synonym of *Colymbinectes* Falkenstrom (1936). Species are listed under each subgenus along with the distribution, diagnosis and remarks.

REFERENCES

- FALKENSTROM, G. 1936. Halipliden, Dytisciden und Gyriniden au West und Central China (Coleoptera). *Lingn. J. Sci.*, **15**(1): 79-99.
- GUEORGUIEV, V. 1972. Notes sur les Agabini des Genres *Platynectes* Reg. et *Colymbinectes* Falk.—*Izv. Inst. Zool. Mus., Sofia*, **34**: 33-62.
- GUIGNOT, F. 1946. Genotypes des Dytiscoidea and Gyrinoidea.—*Rev. franc. ent.*, 19-17-31.
- REGIMBART, M. 1878. Etude sur la classification des Dytiscidae. *Ann. Soc. ent. Fr.*, (5) **8**: 447-466.
- VAZIRANI, T. G. 1970. Contributions to the study of Aquatic Beetles (Coleoptera)—VII. A revision of Indian Colymbetinae (Dytiscidae). *Orient. Ins.*, **4**: 303-362.