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On the synonymy of *Indomecus* PAJNI & GANDHI with *Tanymecus* GERMAR and on the status of *Esamus* CHEVROLAT (Insecta, Coleoptera, Curculionidae: Brachyderinae)

With 18 Figures

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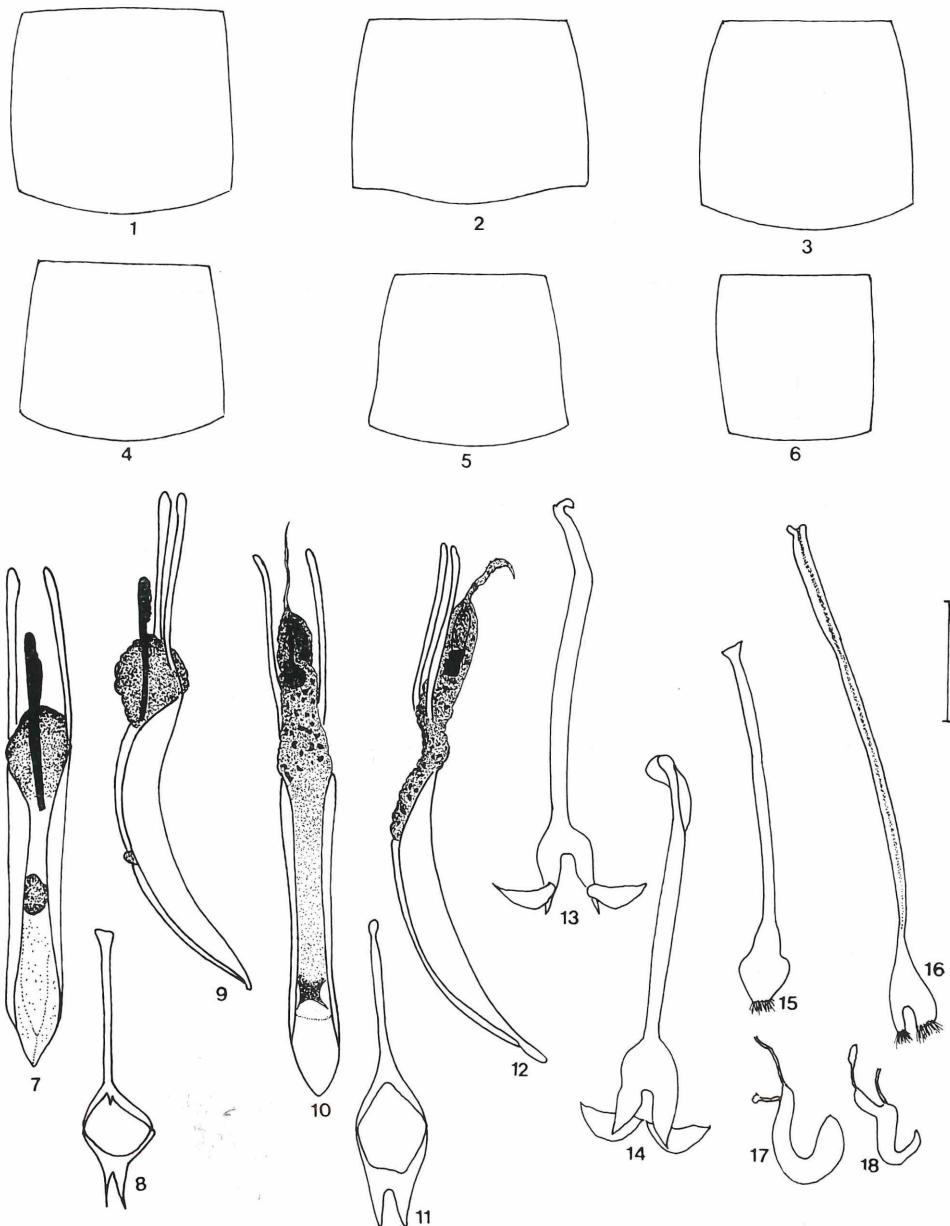
Abstract. Revision of *Tanymecus* GERMAR from India and adjacent countries (SUPARE, GHAI & RAMAMURTHY, 1990) including 44 species of 47 known have concluded that there is no validity in considering *Indomecus* PAJNI & GANDHI and *Esamus* CHEVROLAT as distinct from *Tanymecus*, since the distinguishing character emphasized by PAJNI & GANDHI (1987 1988) namely, prothorax not distinctly wider at middle than at base exhibits exceptions. The evaluation of this character, elytral vestiture and the genitalic features namely aedeagus, endophallus, tegmen, spiculum gastrale, spermatheca and spicule prove that except for *agrestis* (FAUST), *chlorites* (FAUST) and *verlorenii* (VOLLENHOVEN), all other species of *Tanymecus* form a monophyletic group and should be considered as a single group. Hence, it is proposed that *Indomecus* be synonymized with *Tanymecus* and concluded that *Esamus* could not be considered as a valid genus.

Introduction

As a result of studies on 22 species of *Tanymecus* GERMAR (1817), a new genus *Indomecus* was erected by PAJNI & GANDHI (1987 1988) for species namely *iracundus* (FAUST, 1891), *lectus* MARSHALL (1916), *princeps* (FAUST, 1891), *bombayensis* PAJNI & GANDHI (1988) and *brevimandibularis* PAJNI & GANDHI (1988). This study also advocated considering *Esamus* CHEVROLAT (1880) as a distinct genus. The genera *Indomecus* and *Esamus* were distinguished by them from *Tanymecus* based upon their prothorax being not distinctly wider at middle than at base. The revisionary studies on 44 species of the 47 known so far of *Tanymecus* from India and adjacent countries (SUPARE, GHAI & RAMAMURTHY, 1990) does not support these views and the observations leading to this conclusion are presented below.

New synonymy of *Indomecus* with *Tanymecus*

The genus *Indomecus* was erected by PAJNI & GANDHI as distinct from *Tanymecus* as it has its prothorax not distinctly wider at middle than at base. Evaluation of this character from the 44 species of *Tanymecus* indicate that there are many other species like *andrewesi* (FAUST, 1897), *chevrolati* (FAHRAEUS in SCHOENHERR, 1834), *circumdatus* (WIEDEMANN in GERMAR, 1821), *innocuus* (FAUST, 1897), *mixtus* (FAUST, 1894b) and *tectonae* SUPARE (in SUPARE, GHAI & RAMAMURTHY, 1990) all of which have their prothorax not wider at middle than at base (Figs. 1-6). The three species of *Tanymecus* namely *iracundus*, *lectus* and *princeps* which had been transferred to *Indomecus* by PAJNI & GANDHI were analysed for this character to ensure the validity of distinction of *Indomecus* from *Tanymecus*. This analysis has revealed that these species do not form a monophyletic group, as there is no other evidence to support their distinction from *Tanymecus*.



Figs. 1–6: *Tanymecus*, prothorax, dorsal view. 1: *circumdatus*, 2: *chevrolati*, 3: *andrewesi*, 4: *mixtus*, 5: *innocuus*, 6: *tectonae*. — Figs. 7–14: *Tanymecus*, male genitalia. 7–9, 13: *princeps*, 10–12, 14: *lectus*. — Figs. 15–18: *Tanymecus*, female genitalia. 15, 17: *lectus*, 16, 18: *princeps*.

(Scale: 0.5 mm)

For example, spermathecae of *lectus* and *princeps* are entirely different as also the spicules (Figs. 15–18). Likewise the male genitalia which have a direct bearing on the phylogeny were found to differ in their sclerotization and structure (Figs. 7 to 14). Also the character of prothorax not wider at middle than at base exhibits intraspecific variations and is not

valuable enough to be considered as a character for distinction of genera. All these observations which are based on the studies of 1700 specimens of 44 species indicate that the erection of a new genus *Indomecus* as distinct from *Tanymecus* by PAJNI & GANDHI is not on a sound basis. Hence, it is proposed that *Indomecus* be synonymized with *Tanymecus* so that the monophyletic nature of the latter is preserved.

On the validity of *Esamus* as a distinct genus

The perusal of literature reveal that CHEVROLAT (1880) replaced the then subgenus *Asemus* of SCHOENHERR (1826), with *Esamus* explaining that the former was preoccupied and treated the latter as a distinct genus. FAUST (1885), who considered *Esamus* as a subgenus earlier, later in 1891 and 1892, approved the views of CHEVROLAT. But again in 1894, he considered *Tanymecus* and *Asemus* as distinct genera. Thus FAUST considered *Esamus* as a distinct genus earlier but replaced it later with *Asemus* without assigning any reason and simultaneously used *Tanymecus* also. MARSHALL (1916) upheld the view of CHEVROLAT in considering *Asemus* preoccupied and stated that *Tanymecus* should also include species that were falling under *Esamus*, either as a genus or subgenus. He also opined that all differentiating characters between *Tanymecus* and *Esamus* exhibit exceptions and therefore *Esamus* could not be considered a valid genus.

The observations on 44 species of *Tanymecus* categorically support the view of MARSHALL in synonymizing *Esamus* with *Tanymecus*. PAJNI & GANDHI (1987 1988) while contradicting this view based their observations only on 22 species and had emphasized an unsound character namely prothorax not wider at middle than at base, which exhibits exceptions and drastic intraspecific variations. No doubt that except for *princeps*, all other species of *Tanymecus* which were previously considered as *Esamus* are larger and have their eighth sternite (spicule) of females spear shaped. But the evaluation and analysis of genitalia and other diagnostic characters which are considered as valuable for deciphering information on the phylogeny have concluded that there is no valid basis for considering *Esamus* as distinct from *Tanymecus* even at subgeneric level. Hence, it is concluded that *Esamus* should not be considered as distinct from *Tanymecus*.

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