

THE PALAEARCTIC NEMONYCHIDAE (COLEOPTERA : CURCULIONOIDEA)

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Key words : *Nemonyx*, *Cimberis*, *Doydirhynchus*, revision.

Résumé. – Les Nemonychidae paléarctiques (Coleoptera : Curculionoidea). – Les Nemonychidae de la région paléarctique sont révisés. – L'introduction traite brièvement des débris fossiles, de la diversité de la faune actuelle, des associations plantes-hôtes et des modèles de distribution. Les genres et espèces sont redécrits, les genitalia mâles et femelles et d'autres caractères morphologiques illustrés. La faune paléarctique se compose de sept espèces réparties dans trois genres, *Nemonyx* avec quatre espèces, *Cimberis* avec une espèce, et *Doydirhynchus* avec deux espèces. *Nemonyx grisescens* Reitter est mis en synonymie avec *N. lepturoides* (Fabricius), *N. semirufus* Pic passé du statut de variété de *N. lepturoides* (Fabricius), à celui d'espèce, *N. variicolor* Abeille mis en synonymie avec *N. semirufus* Pic, *Doydirhynchus karamani* Stierlin mis en synonymie avec *D. austriacus* (Olivier) et *D. bicolor* Pic passé du statut de variété de *D. austriacus* (Olivier) à celui d'espèce. Les lectotypes des espèces suivantes sont désignés : *Rhinomacer lepturoides* Fabricius, *Nemonyx grisescens* Reitter, *N. scutellatus* Abeille, *N. semirufus* Pic, *N. variicolor* Abeille, *Rh. attelaboides* Fabricius, *Curculio rhinomacer* Paykull, *Doydirhynchus castaneus* Germar, *D. karamani* Stierlin, *D. pallidicolor* Pic, *D. bicolor* Pic et *D. testaceus* Pic. Un spécimen de Dresde est désigné comme néotype pour *Rhynchites austriacus* Olivier et déposé au Muséum national d'Histoire naturelle, Paris.

Abstract. – The Nemonychidae of the Palaearctic region are revised. The introductory part deals briefly with fossil evidence, diversity of extant fauna, host plant associations and distribution patterns. Genera and species are redescribed, male and female genitalia and other morphological characters illustrated. The Palaearctic fauna consists of seven species in three genera, *Nemonyx* with four species, *Cimberis* with one, and *Doydirhynchus* with two. *Nemonyx grisescens* Reitter is synonymised with *N. lepturoides* (Fabricius), *N. semirufus* Pic raised from variety of *N. lepturoides* (Fabricius) to species status, *N. variicolor* Abeille synonymised with *N. semirufus* Pic, *Doydirhynchus karamani* Stierlin synonymised with *D. austriacus* (Olivier) and *D. bicolor* Pic raised from variety of *D. austriacus* (Olivier) to species status. Lectotypes of the following species are designated : *Rhinomacer lepturoides* Fabricius, *Nemonyx grisescens* Reitter, *N. scutellatus* Abeille, *N. semirufus* Pic, *N. variicolor* Abeille, *Rh. attelaboides* Fabricius, *Curculio rhinomacer* Paykull, *Doydirhynchus castaneus* Germar, *D. karamani* Stierlin, *D. pallidicolor* Pic, *D. bicolor* Pic, and *D. testaceus* Pic. A specimen from Dresden is proposed as neotype for *Rhynchites austriacus* Olivier and deposited at the Muséum national d'Histoire naturelle, Paris.

The Palaearctic region once had a rich fauna of Nemonychidae as evidenced by the diversity and abundance of forms trapped and preserved in the Karatau deposits of Kazakhstan. These deposits date back to the Jurassic, the era of conifers and dinosaurs of 140

million years ago. The fossils now considered to represent early forms of Nemonychidae (Kuschel 1983, 1989) were described by Arnoldi (1977) under the family name Eobelidae. As the same deposits holding the weevil fossils contain a vast variety of conifers and other gymnosperms but no phanerogams or flowering plants, and nearly all present-day nemonychids live in male strobili of conifers, it should be only natural to assume that also the fossil Nemonychidae were associated with male reproductive organs of conifers.

This first revision of the Palaearctic nemonychid fauna reports seven species in three genera for this large biogeographical region. The principal host plant family for the Nemonychidae in the whole Holarctic is Pinaceae. Although this plant family is widespread and well represented to the east and south of Kazakhstan, no nemonychid species are known from that extensive Asian area as yet. Why it should be so is puzzling. Is it that nobody has paid attention to this unobtrusive weevil group? It would be of considerable interest to know if any species occur today in central and northeastern Asia, an area closely situated to the Kazakhstan's nemonychid cradle of Jurassic times.

The Palaearctic nemonychid fauna though small in number of species is an important one considering that the world fauna consists of only approximately 70 species. Two genera that jointly have three species belong to Doydirhynchinae, a subfamily with 14 species in four genera in the Nearctic, one genus shared between the two regions. The third genus is endemic to the Palaearctic and is so unique that it remains the sole member of the subfamily Nemonychinae. Its uniqueness is heightened by its association with plants other than conifers, with the genera *Consolida* and *Delphinium* and apparently also *Nigella* of the angiosperm family Ranunculaceae. The larva lives inside follicles and feeds on the row of developing seeds which are large and soft in this group of herbs.

There is apparently clinal but noticeable divergence between western and eastern populations of *Nemonyx lepturoides*, and rather conspicuous variation in vestiture, colour, rostral curvature and elytral unevenness in *Doydirhynchus austriacus*, especially in population from the Alps and Balkans.

A cladistic analysis of the Holarctic fauna has been provided elsewhere (Kuschel, 1989) and further information of a general nature on Nemonychidae is found in other publications (Kuschel, 1983, 1989, 1993).

Checklist of the Palaearctic species of Nemonychidae.

Nemonychinae

<i>Nemonyx canescens</i> Solsky, on <i>Consolida camptocarpa</i> .	Transcaspian area
<i>Nemonyx lepturoides</i> (Fabricius), on <i>Consolida regalis</i> .	Europe, Asia Minor to Kazakhstan
<i>Nemonyx scutellatus</i> Abeille, on <i>Consolida</i> and/or <i>Delphinium</i> .	Tunisia
<i>Nemonyx semirufus</i> Pic, on <i>Delphinium peregrinum</i> .	Algeria

Doydirhynchinae

<i>Chimberis attelaboides</i> (Fabricius), on <i>Pinus</i> species.	Europe, Asia Minor to Kazakhstan
<i>Doydirhynchus austriacus</i> (Olivier), on <i>Pinus</i> species.	Europe, Asia Minor
<i>Doydirhynchus bicolor</i> Pic, on <i>Pinus</i> species.	Morocco, Algeria, Tunisia

Conventions

- NHM Natural History Museum, Department of Entomology, Cromwell Road, London SW7 5BD, England.
- IFPE Institut für Pflanzenschutzforschung, Taxonomie der Insekten, 13 Eberswalde-Finow 1, Schicklerstrasse 5, Germany.
- HNHM Hungarian Natural History Museum, Baross U. 13, 1008 Budapest, Hungary.
- MNHN Muséum National d'Histoire Naturelle, 45, Rue Buffon, 75005 Paris, France.
- NMPC National Museum, Kunratice 1, 148 00 Praha 4, Czechoslovakia.
- NRSS Naturhistoriska Riksmuseet, Department of Entomology, 10405 Stockholm, Sweden.
- ZIAS Zoological Institute, Academy of Sciences, Leningrad, 199164, Russia.
- ZMHU Zoologisches Museum, Humboldt Universität, Invalidenstrasse 43, Berlin, Germany.
- ZMUC Zoological Museum, University of Copenhagen, Department of Entomology, Universitetsparken, 2100 Copenhagen, Denmark.
- ZMUH Zoologisches Museum und Institut, Hamburg, Germany.
- ZMUM Zoological Museum, Moscow State University, Moscow, Russia.
- ZSBS Zoologische Sammlung des Bayerischen Staates, München 19, Germany.

Key to genera

1. Adult. Mandibles in shallow sockets, with setae extended over a large area (fig. 71, 77). Mid-coxal cavities laterally open to pleurites (fig. 75). Ventrite 1 not rimmed at coxal cavity. Ventrite 5 in female with setiferous fovea on either side (fig. 73, 74). Tarsal segment 2 dorsomedially truncate, lateroapically rounded. Claws bifid (fig. 72). Internal sac lacking basal sclerite (fig. 1). Distal hemisternites developed to a piercing device, heavily sclerotised, with large dorsal process, with very small receding styli (fig. 13). Larva. Legs with law. Hostplant family *Ranunculaceae* *Nemonyx*
- Adult. Mandibles in deep sockets, with setae mainly in a dorsolateral groove. Mid-coxal cavities laterally closed by meso and metasternal lobes (fig. 76). Ventrite 1 distinctly rimmed at coxal cavity. Ventrite 5 in female without setiferous fovea on either side. Tarsal segment 2 dorsomedially lobed, lateroapically projecting. Claws simple. Internal sac with long, robust, flagelliform basal sclerite (fig. 47). Distal hemisternites not piercing, soft, without dorsal process, with well developed apical styli (fig. 50). Larva. Legs without claw. Hostplant family *Pinaceae* 2
2. Mandibles inserted laterally, their sockets only partially exposed in dorsal view. Mandibles horizontal, continuous with rostral axis in lateral view. Maxillary palp 4-segmented. Pronotum not or hardly emarginate at apex. Epipleural carina narrow. Bursa copulatrix attenuated to a caudiform extension *Cimberis*
- Mandibles inserted dorsally, their sockets entirely exposed in dorsal view. Mandibles directed obliquely downwards in relation to rostral axis. Maxillary palp 3-segmented. Pronotum distinctly emarginate at apex. Epipleural carina broad. Bursa copulatrix not attenuated to a caudiform extension *Doydirhynchus*

NEMONYX Redtenbacher

(*Nemonyx* : from the Greek verb *némo* = divide, and *ónyx* = claw; gender masculine)

Nemonyx Redtenbacher, 1845 : 96. - Scheerpeltz & Winkler, 1930 : 252. - Hustache, 1931 : 468 (sep. 1187). -

Porta, 1932 : 330. – Hoffmann, 1945 : 168, 169. – Endrödi, 1958 : 4. – Kuschel, 1959 : 233, 237. – Dieckmann, 1974 : 23. – Pesarini, 1978 : 7. – Cmoluch, 1979 : 9. – Lohse, 1981 : 112, 113. – Angelov, 1981 : 51. – Ter-Minasyan, 1984 : 107, 108. – Crowson, 1985a : 144 ; 1985b : 57.

Nematomyx Agassiz, 1846 : 247 (emend.)

For earlier literature see Dalla Torre & Voss, 1937 : 4.

Head retractile to eyes ; temples slightly constricted behind eyes. Frons anteriorly as wide as or wider than rostrum at apex. Eyes large, circular or broadly oval in lateral view, finely faceted. Rostrum short, very thick, gently or deeply saddled at base against frons, dorsally curved, constricted laterally at antennal insertions ; pubescence on dorsum between base and antennae directed forward. Scrobes large, deep, foveiform, with sharp upper edge. Antennae slightly antemedian, inserted close to mandibular sockets, segment 1 considerably longer and thicker than segment 2, not flattened underneath, condyle usually not concealed in dorsal view. Labral suture fine, distinct, curved ; labrum large, transverse, with irregularly scattered setiferous puncta on dorsum and a fringe of setae on apical margin. Mandibles large, robust, strongly incurved, without teeth on inner edge, multisetose on outer face on proximal half. Maxillary palp flexible, with terminal segment about as long as antennal segment 2. *Prothorax* longer than wide, with distinctly raised basal rim. Mesonotum densely punctate and pubescent, lacking stridulatory files. *Elytra* without distinct striae, these vaguely indicated by fine, shallow depressed lines ; marginal stria distinct ; lateral margin not carinate. Hind wings with 4 anal veins. Prosternum in front of coxae a little longer than a coxal diameter, with large, broad intercoxal process descending to nearly tip of coxae. Mesocoxal cavity open laterally to mesepimeron ; intercoxal process wide. Ventricle 1 without coxal cavity rim. Ventricle 5 slightly emarginate at apex in male, with a large, deep setiferous fovea on either side in female. *Legs* long, slender ; femora weakly clavate, tibiae straight, all with 2 spurs, not mucronate in male ; tarsi unusually long, segment 2 without projecting apical angles ; cryptotarsite inserting on middle of segment 3 ; claws long, diverging rather than divaricate, bifid, outer tooth pointed, inner tooth only slightly shorter, usually expanding a little and curving inward. Hind gut with distinct rectal ring, lacking plates between ring and anus.

Male. – Tergite 8 exposed beyond tergite 7, high, strongly convex, sclerotised throughout. Sternite 8 membranous, with or without setae ; apodeme with arms. Sternite 9 long, rather slender and straight, with short or long arms. Tergite 9 a well-sclerotised fine arc. Tegmen strongly sclerotised, with jointly tapering parameres, these usually slightly emarginate at apex, with few short or very short setae at apex ; apodeme long. Aedeagus : pedon membranous at proximal half, with longitudinal groove on ventral surface at distal half flanked by 2 carinae, with a slightly or distinctly widened, subtruncate or emarginate apex ; tectum short, well sclerotised ; apodemes broad, fused lateroventrally to main body ; apodemal bridge present, without median process ; internal sac extending beyond tips of apodemes, tapering towards base and more or less continuous with ejaculatory duct, with 2 pairs of sclerites and 2 or 3 zones of fine wall armature.

Female. – Tergite 8 high, membranous, impressed for most part, with a large, heavily setose apical process on either side. Sternite 8 ill-defined on sides, with darker and paler designs, with short, usually strongly compressed apodeme. Tergite 9 entire at apex, pigmented on sides. Proximal and distal hemisternites fused together forming combined a strong, heavily sclerotised frame much like that of Anthribidae, fused with a large, winged dorsal process extending seemingly deeply into the lumen of the proximal hemisternites (= segment 9), heavily sclerotised at apex, compressed, with upper and lower edges turned outward forming a concave outer face, the lower edge bidentate ; styli small, receded, more or less concealed in the concave face. Bursa a large bag, spermatheca strongly sclerotised, with rather large atrium and small gland ; spermathecal duct short, inserted some distance from oviduct.

Type species : *Nemonyx lepturoides* (Fabricius).

Distribution. – Palaearctic.

Host plants. - *Delphinium* and *Consolida* (Ranunculaceae).

Remarks. – It is hardly necessary to draw attention to the uniqueness of the genus on account of general morphology, genitalic features, and association of the species with plant genera of the family Ranunculaceae. The sexual dimorphism is not obvious except on the last ventrite which has a large setiferous patch in a fovea on either side in the female. The fine tips of the hemisternites are usually projecting resembling, without the aid of higher magnification, a protruding aedeagus. This peculiarity may explain why the sexes

were frequently reversed in sex determinations in the past. Crowson (1955) presents a figure of the hind wing of *Nemonyx lepturoides* (Fabricius) with 5 anal veins but about 30 wings of this and other species of the genus were checked and only 4 anal veins were always observed. Four species are recognised, the more widely-spread *N. lepturoides* exhibiting clinal variations.

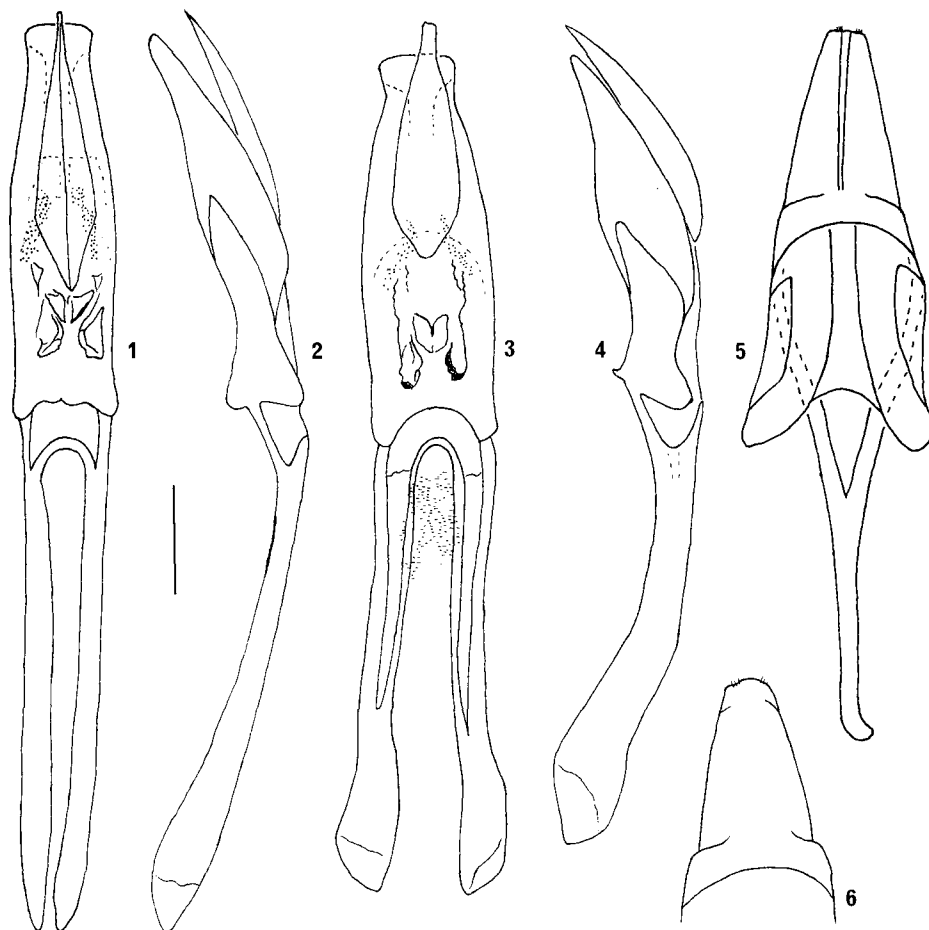


Fig. 1-6, *Nemonyx lepturoides*, male. – 1, 2, aedeagus, dorsal and lateral, La Ferté-Alais, France. – 3, 4, aedeagus, dorsal and lateral of variant “grisescens”, Orduvad, Nakhichevan. – 5, tegmen, La Ferté-Alais. – 6, parameral sector, Orduvad. All to same scale = 0.2 mm.

Key to species of *Nemonyx*

1. Elytral integument black, as dark as pronotum. Tibiae black or nearly so. Male : aedeagus with an apically subtruncate pedon (fig. 1, 9) ; sternite 9 with long arms (fig. 7, 8). Female : ventrite 5 with a median tubercle at apex 2
- Elytral integument red or reddish brown, usually paler than pronotum. Tibiae red or reddish brown. Male : aedeagus with an apically emarginate pedon, (fig. 28, 32) ; sternite 9 with short arms (fig. 31, 35). Female : ventrite 5 without a median tubercle 3
2. Pubescence on elytra fine, leaving most of integument exposed, usually with brown hairs amongst white ones. Antennae extending to eyes usually with segment 2, rarely with base of segment 3. Male : pedon in lateral view high, with a distinctly sinuous ventral line (fig. 2, 4). Female : ventrite 5 at apex with a

large, high, subcarinately compressed, sharply pointed tubercle. On *Consolida regalis*. 3.4-5.7 mm; Europe, western Asia

- lepturoides**
- Pubescence on elytra coarse, concealing most of integument, entirely white. Antennae extending to eyes with middle of segment 3. Male : pedon in lateral view low, with a nearly straight ventral line (fig. 10). Female : ventrite 5 with small, low, blunt tubercle. Hostplant species unknown. 3.8-4.5 mm. Tunisia..... **scutellatus**
3. Elytra red or reddish brown, usually gradually darkening at distal half. Legs red

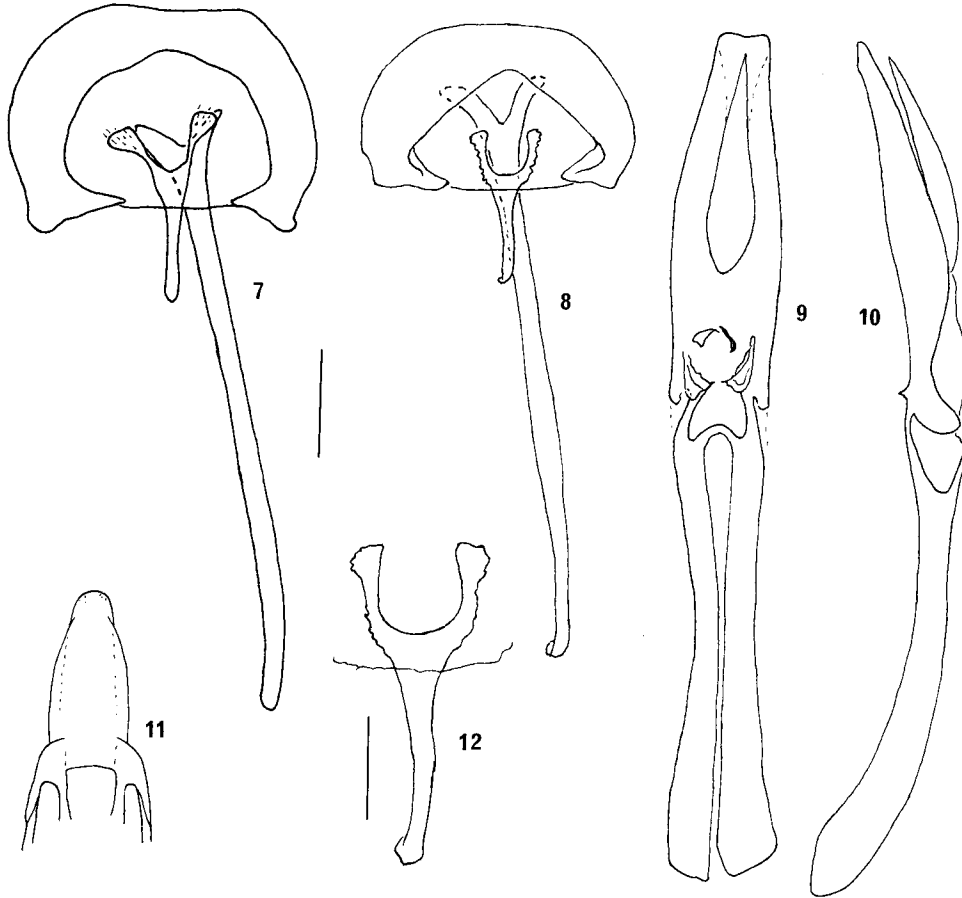


Fig. 7-12, *Nemonyx lepturoides*, male. - 7, tergite 8, sternites 8 and 9, ventral, La Ferté-Alais, France. *N. scutellatus*, male, Cherchera, Tunisia. - 8, tergite 8, sternites 8 and 9, ventral. - 9, 10, aedeagus dorsal and ventral. - 11, parameral sector. - 12, sclerotised part of sternite 8. 7-11 to same scale = 0.2 mm, bar at 12 = 0.1 mm.

or bright reddish brown. Pronotum in lateral view slightly convex. Male : parameral setae not confined to apical margin (fig. 34) ; pedon in lateral view low throughout (fig. 33). Female : hemisternal process with small, narrow wings (fig. 44) ; spermatheca wide at base (fig. 45). On *Delphinium peregrinum*. 2.8-4.3 mm. Algeria

- **semirufus**
- Elytra uniformly dark brown. Femora dark brown, tibiae reddish brown. Pronotum in lateral view strongly convex. Male : parameral setae confined to apical margin (fig. 30) ; pedon in lateral view unevenly high (fig. 29). Female : hemisternal process with large, broad wings (fig. 36) ; spermatheca narrow at base (fig. 41). On *Consolida camptocarpa*. 4.0-4.8 mm. Transcaspian region..... **canescens**

***Nemonyx lepturoides* (Fabricius)**

Rhinomacer lepturoides Fabricius, 1801 : 429.

Nemonyx lepturoides : Redtenbacher, 1845 : 96. - Reitter, 1891 : 32 (as *canescens*). - Abeille, 1898 : 258 (as *canescens*). - Kleine, 1920 : 20 (wing folding mechanism as "stridulatory organ"). - Hustache, 1931 : 469 (repr. 1188). - Porta, 1932 : 330. - Hoffmann, 1945 : 169, fig. 373. - Grandi, 1951 : 896. - Caillol, 1954 : 420. - Liebmann, 1955 : 129. - Endrödi, 1958 : 9, fig. 5. - Kuschel, 1959 : 238, fig. 15-17, 32. - Auber, 1966 : 187, pl. 9 : 170. - Dieckmann, 1974 : 23, fig. 63. - Franz, 1974 : 190. - Pesarini, 1978 : 5, fig. 156. - Cmoluch, 1979 : 10, fig. 1-5. - Lohse, 1881 : 112, 113. - Ter-Minasyan, 1984 : 109, fig. 1-14.

Nemonyx grisescens Reitter, 1899 : 209. - Ter-Minasyan, 1984 : 109. **syn. nov.**

Black ; pubescence fine, semierect, leaving most of integument exposed. Rostrum usually with a median carina in western populations, often without a median carina in eastern populations. Antennae extending to eyes with segment 2, rarely with base of segment 3, slightly longer in male than female ; club segments 1 and 2 becoming more transverse in eastern populations. Female with a strongly convex ventrite 5, with a carinate, pointed apical tubercle on this ventrite.

Male. Tergite 8 and sternite 8 as in figures 7, 8, sternite with or without setae at end of apodemal arms ; sternite 9 as in figures 7, 8, with long arms. Tegmen as in figure 5 ; apical setae variable in numbers and length, but always short to very short. Aedeagus as in figure 1, 2 ; pedon becoming gradually more robust in populations from West to East ; tectum variable in width and at the apex ; apodemal bridge distant from base of aedeagal body, gradually diminishing in populations from West to East.

Female. Tergite 8 as in figure 16 ; sternite 8 as in figure 26, variable in the dark and pale zonations ; tergite 9 as in figure 17. Hemisternites as in figure 13, hemisternal process more openly and more shallowly emarginate between wings in eastern populations ; styli more reduced in western populations than in eastern ones. Bursa as in figure 19 ; spermatheca as in figures 19, 20.

Length 3.4-5.7 mm.

Europe and Asia : specimens from France, Germany, Poland, Russia (to 58N, 46E), Czechoslovakia, Switzerland, Austria, Italy, Hungary, Bulgaria, Romania, Greece, Moldavia, Crimea, Turkey, Lebanon, Armenia, Azerbaijan and Kazakhstan. 574 specimens.

Types. – (1) *Rhinomacer lepturoides* Fabricius : 3 syntypes available for type designation. Lectotype male, 4.8 x 1.7 mm, Austria, Andersch. Mus., S[ehstedt] & T[onder] L[und], *lepturoides* F., ZMUC ; paralectotype male, 5.4 x 1.9 mm, same data as lectotype, ZMUC ; paralectotype female, 4.6 x 1.7 mm, no data, *lepturoides* in original handwriting, a reddish brown teneral specimen from the Fabricius Coll. of Kiel at ZMUC.

(2) *Nemonyx grisescens* Reitter : 7 syntypes from Reitter Coll. at HNHM here designated, 1 as Lectotype female, 5.0 x 1.7 mm, Caucasus, Araxesthal [Araks Valley in Armenia], Leder, Reitter, *Nemonyx grisescens* m 1899, bearing a red-rimmed subsequent label as holotype, and 3 males and 3 females as paralectotypes, all these with same locality and collector label and with a red-rimmed subsequent paratype label. A further series of 21 specimens from the type locality of *N. grisescens* are present from MNHN, ZSBS, Leningrad but these were apparently sent away to these centres under the name of *N. canescens* before Reitter became aware of a misidentification and renamed it *N. grisescens*.

Hostplants. – *Consolida regalis* (formerly *Delphinium consolida*), apparently also *C. paniculata* and/or *C. divaricata*.

Biological notes. – Some observations were kindly carried out in southern Slovakia by P. Svácha on special request for use in the present paper. He found that adults are very common during June and July in the area flying readily in the daytime and feeding and mating on the hostplant, the annual larkspur *Consolida regalis*. They feed primarily

on the pollen of the anthers but will also feed on the petals, in particular on the nectar-holding spur. No oviposition was observed but a larva was consistently found inside the follicles behind a pinhole undoubtedly pierced with the hard, pointed ovipositor of a

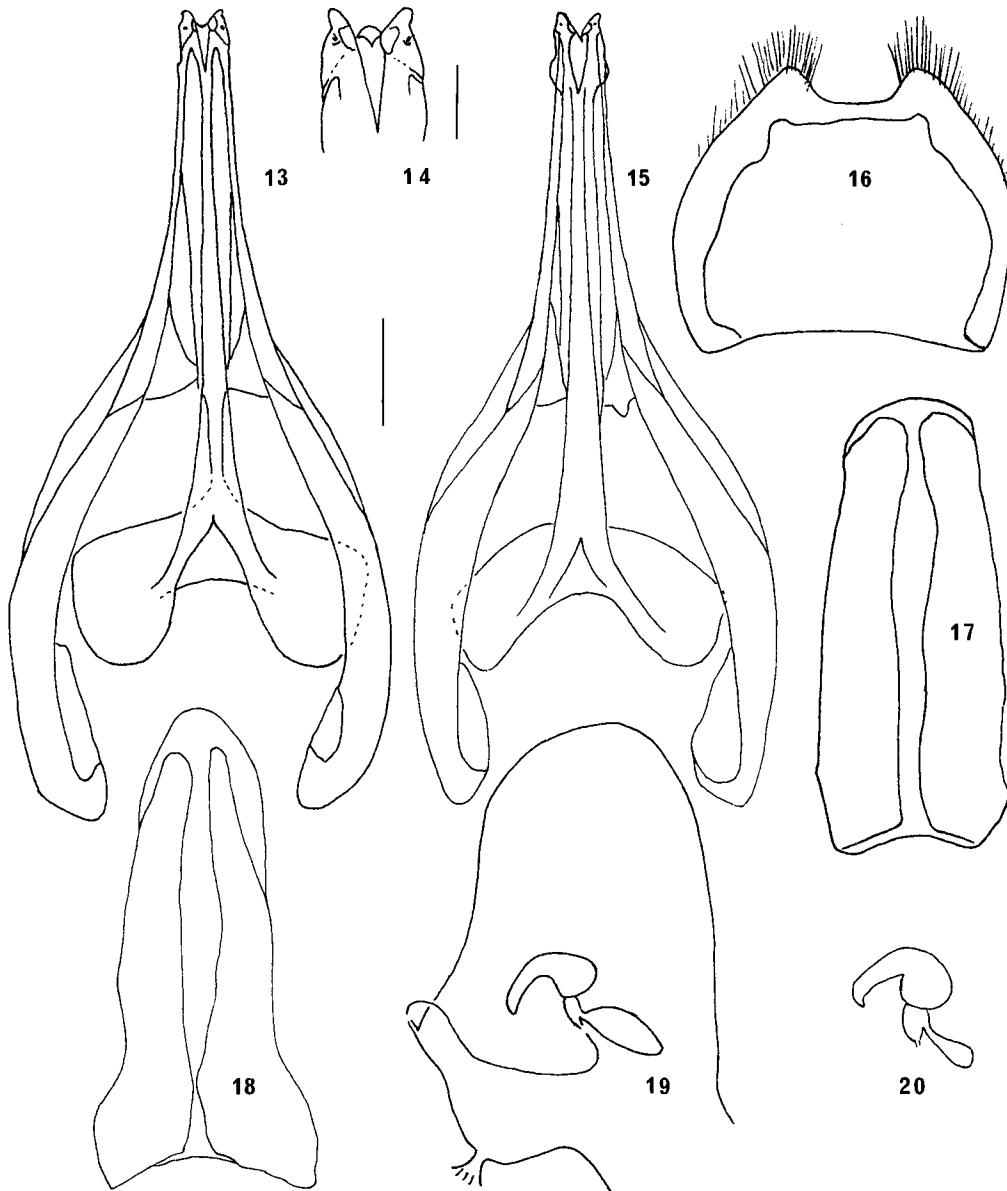


Fig. 13-20, *Nemonyx lepturoides*, female. – 13, hemisternites, ventral, “La Bonde”, dept Vaucluse, France. – 14, apex of same. – 15, hemisternites of variant “grisescens”, Ordubad, Nakhichevan. – 16, tergite 8, “La Bonde”. – 17, tergite 9, “La Bonde”. – 18, same, Ordubad. – 19, bursa and spermatheca, “La Bonde”. – 20, spermatheca, Ordubad. All but 14 to same scale = 0.2 mm, bar at 14 = 0.05 mm.

female. The larva feeds on the large soft seeds of the 8-15 mm long follicle and abandons the fruit to overwinter in the soil.

Remarks. – A proper assessment of the geographical variations of the species is impaired by the lack of materials from a wider range at the eastern areas of occurrence and

the absence of host plant information from this particular region. There are rather strong indications, however, that the variations are of a clinal nature and the two names available refer to the most extreme populations. Abeille de Perrin (1898) apparently found once a series of specimens on *Echinops ritro* (Asteraceae) at Apt in southern France, which was reported under the name *N. canescens* Solsky. Because of the statement implying that a second *Nemonyx* species might occur in France, specimens of the series were dissected.

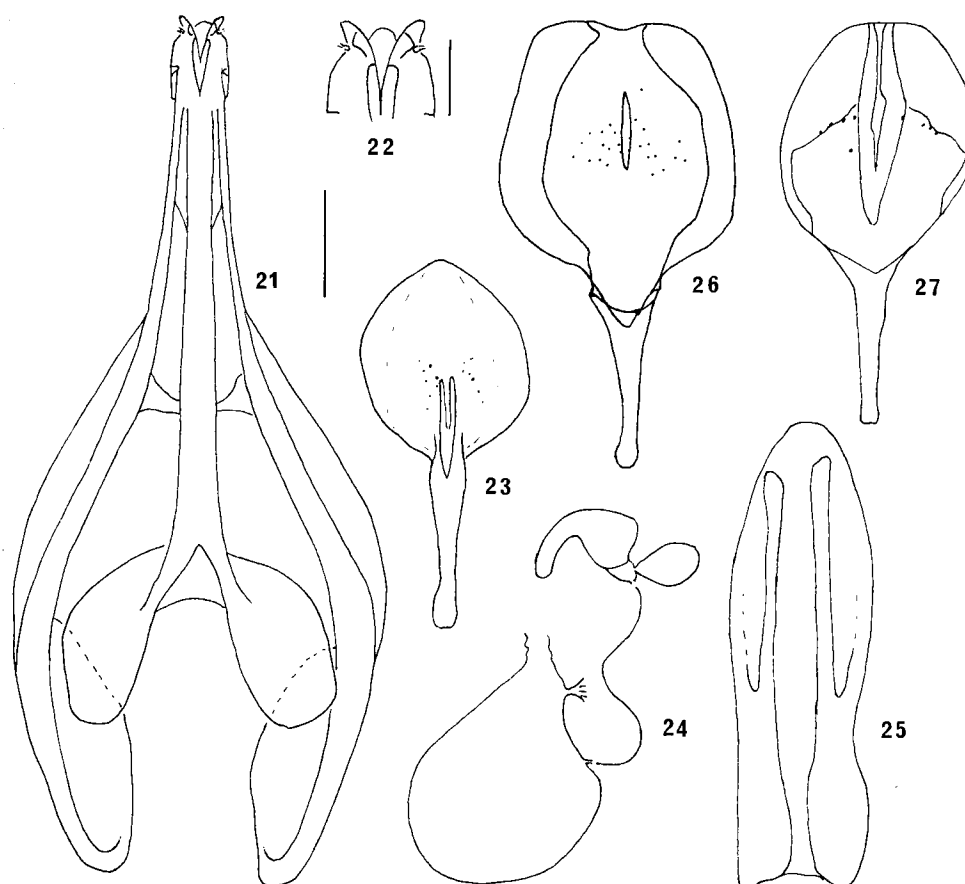


Fig. 21-27, *Nemonyx scutellatus*, female, Cherichera, Tunisia. – 21, hemisternites, ventral. – 22, apex of same. – 23, sternite 8. – 24, bursa and spermatheca. – 25, tergite 9. *N. lepturoides*, female. – 26, sternite 8, “La Bonde”, dept Vaucluse, France. – 27, same of variant “grisescens”, Orudbad, Nakhichevan. All but 22 to same scale = 0.2 mm, bar at 22 = 0.05 mm.

No morphological differences with typical *N. lepturoides* were found and the gut contents sent to the palynologist Dr N. Moar revealed pollen grains of the *Delphinium-Aconitum* type only. Kleine (1920) was referring to the wing-folding mechanism when he described this structure as a “rudimentary or perhaps primitive” stridulatory organ.

Nemonyx scutellatus Abeille

Nemonyx scutellatus Abeille, 1901 : 234. - Voss, 1922 : 8.

Black ; pubescence on elytra white, slightly raised, coarse and dense, concealing most of integument. Rostrum a little less robust than in *N. lepturoides*, less constricted below scrobes,

more gently saddled at base, with a wide, gently raised smooth median line. Antennae extending to eyes with the middle of segment 3. Ventrite 5 in female with a very small, low, blunt medioapical tubercle.

Male. – Tergite 8 and sternite 8 as in figure 8, apodemal arms of sternite with rugged outer edge (figures 8, 12) ; sternite 9 as in figure 8, with long arms. Tegmen as in figure 11, its setae very short, not confined to the apical margin. Aedeagus as in figures 9; 10 pedon weakly emarginate at apex, low in lateral view ; tectum pointed at apex ; apodemal bridge rather distant from base of aedeagal body.

Female. – Tergite 8 similar to that of *N. lepturoides* at figures 16 and 78 ; sternite 8 as in figure 23 ; tergite 9 as in figure 25. Hemisternites as in figure 21 ; stylus small, distinct, with long setae (figure 22). Bursa and spermatheca as in figure 24.

Length 3.8-4.5 mm.

Tunisia : Cherichera near Kairouan. 3 specimens.

Types. – Three syntypes present. Lectotype male, 3.8 x 1.4 mm, Cherichera, Tunisie, de Vauloger, Coll. M. Pic, MNHN ; 1 male paralectotype (Coll. A de Perrin) and 1 female paralectotype (Coll. M. Pic), MHNH.

Hostplant. – Unknown, but the hind gut contained pollen of the *Delphinium-Aconitum* type, thus confirming its likely association with *Consolida* or *Delphinium*.

Remarks. – This species is readily distinguished by the characters given in the key.

Nemonyx semirufus Pic

Nemonyx semirufus Pic, 1898a : 74 (July, as variety of *N. lepturoides*) ; 1898b : 113 (priority and synonymy with *N. variicolor* stated).

Nemonix [sic] *variicolor* Abeille, 1898 : 258 (August). – Voss, 1922 : 8. **syn. nov.**

Head, prothorax and underside usually black, antennae, the distal half of rostrum and the legs red, elytra reddish at proximal half, gradually darker from the middle on. Pubescence on elytra short, fine, white, recumbent to slightly raised. Rostrum with short median groove just behind antennae, groove rarely continued to base.

Male. – Sternite 9 with short arms (fig. 35). Parameral sector as in figure 34. Aedeagus as in figures 32, 33.

Female. – Sternite 8 as in figure 42 ; tergite 9 as in figure 43. Hemisternites as in figure 44 ; styli small, distinct ; spermatheca as in figure 45, proximal half strongly enlarged.

Length 2.8-4.3 mm.

Algeria : El Kroub (spelled also Kheroub, Khroub, Kroubs) nr Constantine ; Ain Touta. 113 specimens.

Types. – (1) *N. semirufus* : Lectotype male, 4.2 x 1.5 mm, Kroubs, type, v. *semirufus*, Coll. M. Pic, MNHN. – (2) *N. variicolor* : Lectotype male, 4.1 x 1.45 mm, Kroubs, Constantine, Type, Coll. A. de Perrin, MNHN.

Hostplant. – *Delphinium peregrinum*.

Remarks. – Most specimens from El Kroub at hand probably are syntypes of one or the other name given to the species but, as the precise name originally assigned to individual specimens could not be determined, no specimens are designated as paralectotypes.

Distinguishing characters are given in the key.

Nemonyx canescens Solsky

Nemonyx canescens Solsky, 1881 : 263. - Marseu, 1888 : 455 (as *cinerascens* in error). - Reitter, 1899 : 209. - Voss, 1922 : 5, 7. - Kuschel, 1959 : 238, fig. 18, 19. - Ter-Minasyan, 1984 : 109, fig. 15, 16.

Head, prothorax and underside black or nearly so, elytra dark reddish brown, tibiae and sometimes femora reddish brown. Pubescence on elytra short, fine, nearly applied to surface. Rosstrum in lateral view not or very slightly saddled at base, with broad median groove from antennae to base. Antennae extending to eyes with segment 3. Prothorax curved on sides, distinctly convex in lateral view. Ventrite 5 in female flattened between lateral foveae, without a tubercle at apex.

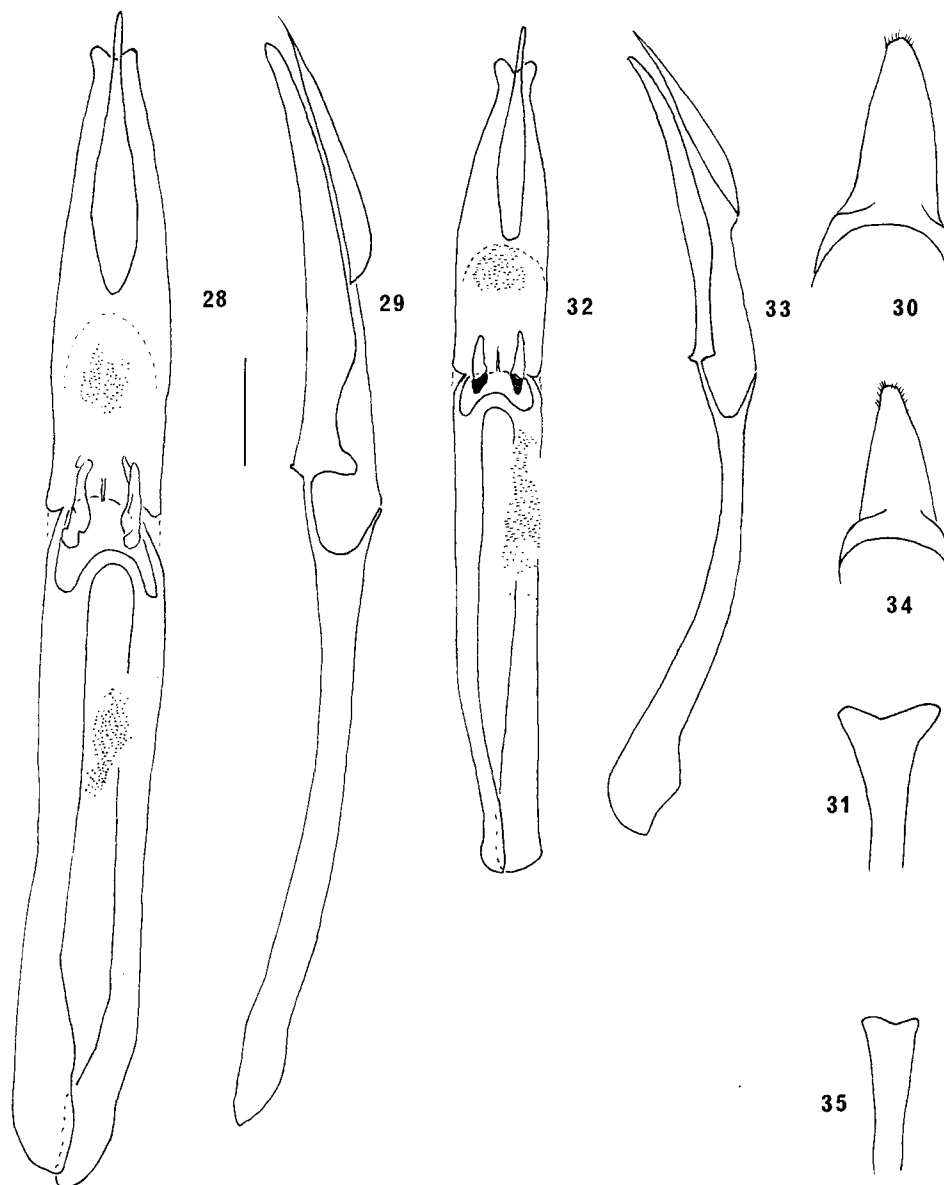


Fig. 28-35, *Nemonyx canescens*, male, Turkmenistan. - 28, 29, aedeagus, dorsal and lateral. - 30, parameral sector of tegmen. - 31, arms of sternite 9. *N. semirufus*, male, Ain-Touta, Algeria. - 32, 33, aedeagus, dorsal and lateral. - 34, parameral sector of tegmen. - 35, arms of sternite 9. All to same scale = 0.2 mm.

Male. - Sternite 9 with short arms (figure 31). Parameral sector as in figure 30. Aedeagus as in figures 28, 29.

Female. – Sternite 8 as in figure 39 ; tergite 9 as in figure 44 ; hemisternites as in figure 36 ; stylus relatively large, figure 37. Bursa and spermatheca as in figure 44.

Length 4.0-4.9 mm.

Asia : Caspian Sea to Bakanas, specimens present from Turkmenistan, Uzbekistan and Kazakhstan, approx. 37 to 45N, 55 to 77E. 22 specimens.

Types. – No syntypes seen by me, but two are in Leningrad kindly designated by M.E.Ter-Minasyan (pers. comm. 20 May 1983) as follows : Lectotype male, 4.6 mm, and

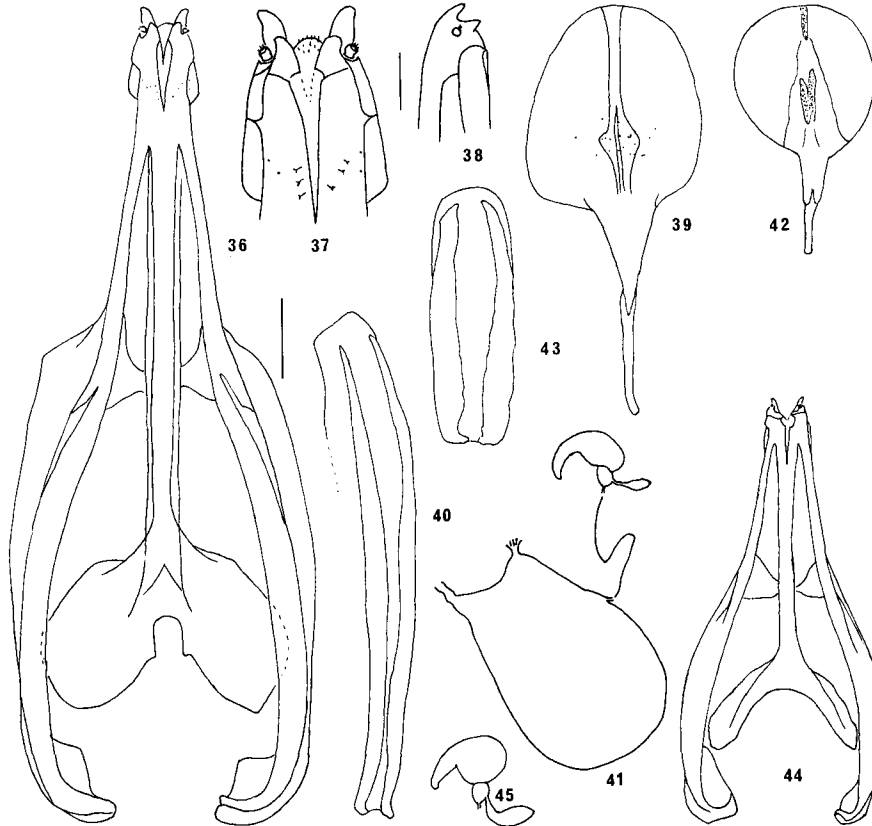


Fig. 36-45, *Nemonyx canescens*, female, Turkmenistan. – 36, hemisternites, ventral. – 37, apex of same, ventral. – 38, apex of same, lateral. – 39, sternite 8. – 40, tergite 9. – 41, bursa and spermatheca. *N. semirufus*, female, Ain-touta, Algeria. – 42, sternite 8. – 43, tergite 9. – 44, hemisternites. – 45, spermatheca. All but 37, 38 to same scale = 0.2 mm, bar at 37 and 38 = 0.05 mm.

paralectotype female, 4.5 mm, Leningrad ; type localities : Kisil-Kum [Kyzylkum] and Syr-Dariam [Syrdar'ya] in Uzbekistan.

Hostplant. – *Consolida camptocarpa*.

Remarks. – This species is readily distinguished by the strongly convex and smooth pronotum.

CIMBERIS Gozis

(címberis : from the Greek kimbós = obstinate and éris, éridos = the dispute ; gender feminine)
Cimberis Gozis, 1881 : 112 (proposed for *Rhinomacer attelaboides* Fabricius).

Neocimberis O'Brien & Wibmer, 1982 : 3, 18 (proposed for *Rhinomacer attelaboides* Fabricius).
Rhinomacer Olivier, 1807 : 457, 458 (preocc. Mueller, 1764 ; type species *Rhinomacer attelaboides* Fabricius
 by subsequent designation).
 For remainder of literature see Kuschel, 1989 : 131.

Head not fully retractile to eyes, gently constricted behind eyes dorsally and laterally. Eyes small, round or slightly elongate-oval, weakly or strongly protruding. Labrum truncate or

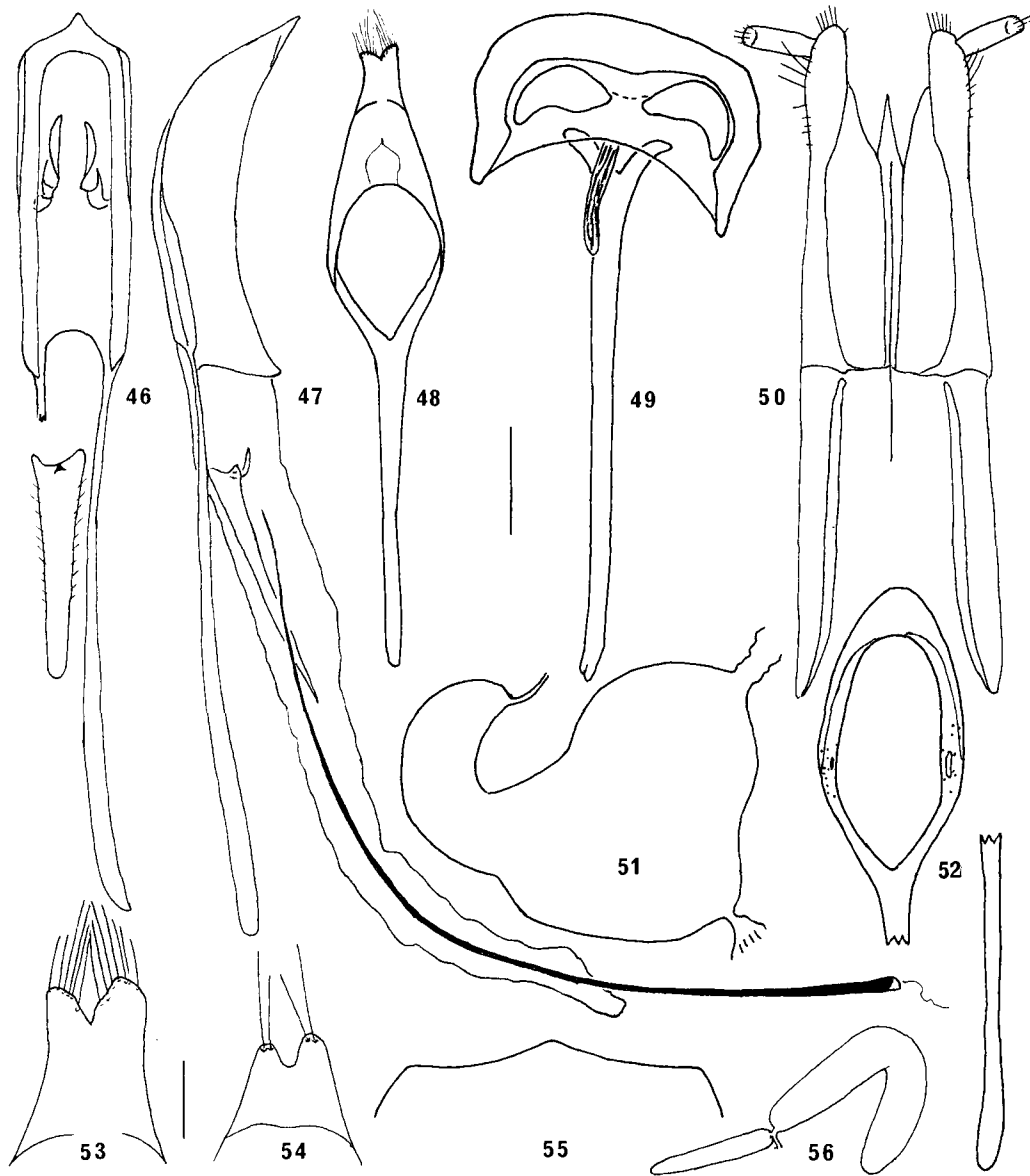


Fig. 46-56, *Cimberis attelaboides*, La Ferté-Allais, France. – 46, 47, aedeagus, dorsal and lateral. – 48, tegmen. – 49, tergite 8, sternites 8 and 9, ventral. – 50, hemisternites. – 51, bursa. – 52, sternite 8, female. – 53, 54, variants of parameral sector. – 55, apex of tergite 7 of male. – 56, spermatheca. All but 53, 54 to same scale = 0.2 mm, bar for others = 0.05 mm.

emarginate, with 3 pairs of dorsal setae and a transverse row of 6-8 peg-like apical setae. Mandibles evenly curved on outer edge, both armed with strong tooth on inner edge. *Ventrites* 3 and 4 in female with 1-2 setiferous patches in densely cribrate foveae secreting a waxy substance.

Aedeagus with distinct apodemal bridge. Internal sac with long, strong flagellum (fig. 47) and blade-like sclerite (fig. 46). Bursa copulatrix with a strongly upcurved, caudiform extension (fig. 51), spermathecal duct inserting at end of extension.

Distribution. – Palaearctic and Nearctic.

Remarks. – This genus comprises 1 species in the Palaearctic and 7 in the Nearctic. The status of *Cimberis* and *Rhinomacer* auctorum is discussed in Kuschel (1989 : 132).

Cimberis attelaboides (Fabricius)

Rhinomacer attelaboides Fabricius, 1787 : 123. - Scheerpeltz & Winkler, 1930 : 253, pl. 49 : 1230. - Hustache, 1931 : 469. - Porta, 1932 : 330. - Hoffmann, 1945 : 170, fig. 376-382. - Grandi, 1951 : 896. - Caillol, 1954 : 420. - Liebmann, 1955 : 129. - Endrödi, 1958 : 9, fig. 5. - Hansen, 1965 : 455, fig. 212. - Angelov, 1965 : 149. - Auber, 1966 : 188. - Dieckmann, 1974 : 23, fig. 67. - Franz, 1974 : 190. - Peez & Kahlen, 1977 : 440. - Pesarini, 1978 : 5, fig. 157. - Cmoluch, 1979 : 11, fig. 6-9. - Lohse, 1981 : 112, fig. 1:1. - Angelov, 1981 : 51, fig. 45. - Ter-Minasyan, 1984 : 110.

Cimberis attelaboides ; Kuschel, 1989 : 133.

Neocimberis attelaboides ; O'Brien & Wibmer, 1982 : 3, 18.

Cimberis canescens Semenow, 1900 : 129 (as variety of *C. attelaboides*).

Curculio rhinomacer Paykull, 1792 : 126.

For remainder of literature see Dalla Torre & Voss, 1937 : 6.

Black ; femora, tibiae, antennae and tip of rostrum red, tarsal segments partially darkened. Pubescence long, coarse, usually distinctly raised on elytra, white, greyish or brownish on dorsal surface, white or greyish on ventral surface ; the fine, sparse erect sensory hairs rather indistinct on dorsum and sides of elytra. Head slightly constricted dorsally and laterally behind eyes, coarsely but shallowly punctate. Frons 1.18-1.36x as wide as rostrum at apex, finely punctate. Eyes large, slightly elongate, moderately convex. Rostrum moderately saddled at base, 1.07-1.25x shorter than prothorax, 1.92-2.13x as long as an apical width, with 1, rarely 3 dorsal carinae, distal part strongly diverging, similar in both sexes, usually impressed, variably punctate except for area near labral suture. Antennae extending to eyes with segment 3 in male, segment 4 in female, segment 3 distinctly longer than 2. Prothorax usually slightly wider than long, occasionally longer than wide, moderately curved on sides, rarely subparallel ; truncate at apex and base, rarely slightly emarginate at apex ; finely, sparsely, shallowly punctate, usually much more finely punctate than elytra on dorsum, frequently with an abbreviated smooth median line and with a slight discal depression on either side of proximal half. Elytra elongate, 1.82-2.10x as long as wide. Ventrites 3 and 4 in female with large, transverse pit of dense white setae. Femora slender, weakly clavate. Fore tibiae in male distinctly curved with a broad, triangular black mucro, in female straight or gently curved ; middle tibiae in male gently curved towards apex, with compressed black mucro, in female usually straight ; hind tibiae in male with very small mucro.

Male. – Tergite 7 as in figure 55. Segment 8 and sternite 9 as in figure 49. Tegmen as in figure 48, parameral area variable in length and shape, shallowly to rather deeply emarginate, occasionally a little asymmetric, each with 2-7 setae (fig. 53, 54). *Aedeagus* as in figures 46, 47 ; main body 0.57-0.64 the length of apodemes, 3.0-3.3x as long as wide ; blade-like sclerite with ciliate margin, all cilia directed caudad or some directed at right angle to axis (fig. 46).

Female. – Sternite 8 as in figure 52 ; hemisternites as in figure 50 ; bursa as in figure 51 ; spermatheca as in figure 56.

Length 2.5-4.9 mm ; width 0.95-1.95 mm.

Europe, N. Africa, Turkey, Western Asia. Specimens from Finland, Sweden, Norway, Russia (to 58N and 58E), Lithuania, Scotland, England, Denmark, Germany, Netherlands, France, Spain, Switzerland, Austria, Italy, Algeria, Hungary, Yugoslavia, Turkey, Kazakhstan. 657 specimens.

Types. – (1) *attelaboides* (Fabricius) : 2 syntypes available for designation : Lectotype male, 3.9 x 1.7 mm, no locality label ['in Sueciae pinetis, de Pay Kull'], *attelaboides* [original label], Fabricius Coll. at Kiel, currently in Copenhagen, ZMUC ; and a paralectotype male, 3.6 x 1.35 mm, no locality, no identification label, Fabricius Collec-

tion at Kiel, now at ZMUC in Copenhagen. – (2) *canescens* Semenow : no original specimens seen. – (3) *rhinomacer* (Paykull) : 4 pinned syntypes, without labels (species described from Upland, Sweden where collected in early June in pine groves), here designated as Lectotype female, 4.1 x 1.7 mm, and 1 male and 2 female paralectotypes, these 2 females representing a variety without a name, in Coll. Paykull, at NRSS, Copenhagen.

Hostplant. – *Pinus nigra*, *P. pinaster*, *P. sylvestris*, *P. uncinata*.

Remarks. – This sole Palaearctic species of the genus *Cimberis* is readily distinguished from the Nearctic species in that the antennae have segment 3 distinctly longer than segment 2. The unusual feature of a ciliate sclerite in the internal sac of *C. attelaboides* is found also in *C. elongata* (LeConte) from eastern North America. The Algerian record is based on a single specimen from Blidah [Blida] in Coll. A. Hustache at MNHN.

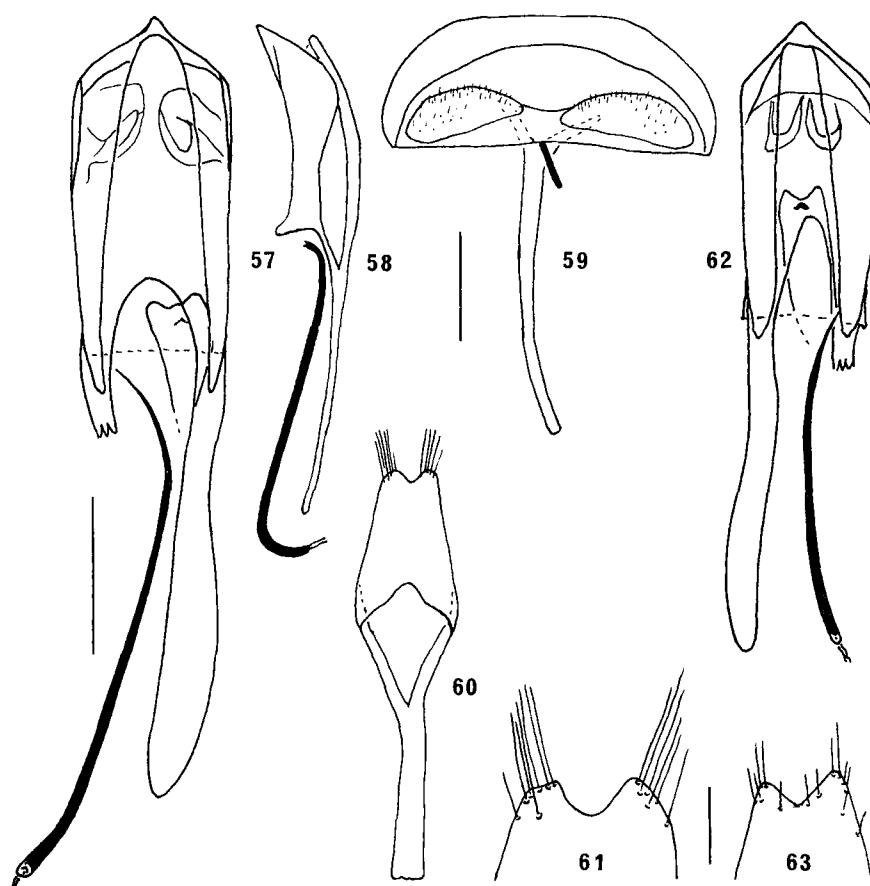


Fig. 57-63, *Doydirhynchus austriacus*, male, San Martin, France. – 57, 58, aedeagus, dorsal and lateral. – 59, tergite 8, sternites 8 and 9, ventral. – 60, tegmen. – 61, apex of parameral sector. *D. bicolor*, male, Chancy, Algeria. – 62, aedeagus, slightly tilted, dorsal. – 63, apex of parameral sector. 57, 62 to same scale = 0.2 mm, 58-60 to same scale 0.2 mm, 61, 63 to same scale = 0.05 mm.

DOYDIRHYNCHUS Dejean

(*Doydirhynchus* : derivation of the first component uncertain, probably just an incorrect transliteration from the Greek dioidéo = to swell, in reference to the frequently inflated prothorax in males, and Greek rhynchos = rostrum, weevil ; gender masculine).

Doydirhynchus Dejean, 1821 : 79. – Arnett, 1963 : 976, 993. – Kissinger, 1964 : 49, 50. – Dieckmann, 1974 : 22, 24. – Cmoluch, 1979 : 10. – Angelov, 1981 : 51. – Lohse, 1981 : 112, 113. – Kuschel, 1989 : 126, 167.

Daediorhynchus Imhoff, 1843 : 4 (emend.).

Diodyrhynchus Germar, 1833 : 240 (emend.) 7. – Everts, 1922 : 503. – Scheerpeltz & Winkler, 1930 : 252. – Hustache, 1931 : 468, 470. – Porta, 1932 : 330. – Hoffman, 1945 : 168, 172. – Endrödi, 1958 : 5. – Kuschel, 1959 : 237. – Voss, 1965 : 234. – Pesarini, 1978 : 6. – Ter-Minasyan, 1984 : 108, 110.

Doedicorhynchus Lucas, 1865 : 206 (lapsus).

Doedycorrhynchus Caillol, 1954 : 421 (lapsus).

Doidyrhynchus Dahl, 1823 : 50 (lapsus).

Doydirrhynchus Peez & Kahlen, 1977 : 440 (lapsus).

Head not fully retractile to eyes, not constricted. Frons very wide, about twice as wide as rostrum at apex. Eyes small, round or slightly oval in lateral view, strongly protruding, nearly hemispherical, finely faceted. Rostrum long, slender, widening at apex, not depressed, with the pubescence of postrostrum directed forward on dorsum, backwards on sides. Scrobes very shallow. Antennae submedian or postmedian, at least as far from mandibular sockets as combined length of first 3 antennal segments ; segments 1-2 slender, elongate, similar in length and width. Labrum very small, strongly transverse, smooth part much shorter than last segment of maxillary palp. Mandibles inserting dorsally with their sockets fully visible in dorsal view, both mandibles armed with strong inner tooth. Maxillary palp 3-segmented. *Prothorax* deeply emarginate at apex, inflated in male. Pronotal pubescence on anteromedian area behind constriction directed forward. Epipleural carina broad. Hind wings with 4 anal veins. Prosternum in front of coxae longer than a coxal diameter in male, shorter in female ; prosternal process small, often indistinct. Mesocoxal process narrow ; mesocoxal cavity closed laterally by lobes of meso- and metasternum. *Ventrite* 1 with rimmed coxal cavity ; ventrites in female lacking bundles of setae. Fore coxae strongly protruding. Tibiae straight in both sexes, all with 2 strong spurs, all with mucro in male.

Male. – Tergite 8 sclerotised, weakly convex. Sternite 8 as in figure 59 with 2 large, transverse, setose plates, with small, slender apodeme. Sternite 9 slender, nearly straight, figure 59. Tergite 9 indistinct. Tegmen as in figure 60, parameral sector weakly sclerotised, broad, undivided, usually emarginate, sometimes truncate or jointly rounded, with variable number of apical setae ; apodeme long. Aedeagus as in figures 57, 58, apodemes without bridge, outer arm fused with laterodorsal extension of pedon, inner arm fused with tectum ; internal sac with long, strong, rather rigid flagellum, with an elongate, apically emarginate, non-ciliate blade-like sclerite, this sclerite with a curved ventroapical process.

Female. – Tergite 8 for most part membranous, pigmented on lateral margins, entire. Sternite 8 with distinct broad blade, with distinct arms and ill-defined, weakly pigmented broad border ; apodemne about as long as blade. Tergite 9 incised. Proximal hemisternites (= sternite 9) with free rods ; distal hemisternites narrowly separate, with subapical long styli, the styli with long setae at apex. Bursa tapering towards insertion point of spermathecal duct at apex. Spermatheca weakly sclerotised, with small translucent atrium common to gland and duct.

Type species : *Doydirhynchus austriacus* (Olivier).

Distribution. – Palearctic.

Remarks. – This genus comprises only two Palearctic species. The Nearctic species previously in the genus now are in *Lecontellus* Kusechel (1989). The various names in the synonymy list were not proposed as separate genera but are the result of inadvertent misspellings or deliberate emendations. The traditionnaly optional dual spelling of rh- or rrh- in Greek compounds are here not considered as different and, consequently, ignored. All species-group names, including “forms”, are treated with species rank to simplify recording of the synonymies.

Key to species of *Doydirhynchus*

1. **Male.** Fore coxae without tubercle on anterior face (fig. 86) although occasionally slightly tumescent. **Female.** Rostrum straight or nearly so ; antennae extending to eyes with segment 5 or tip of 4 ; distal hemisternites short, figure 64 ; spermathecal gland large, fig. 66, 67. 2.5-4.5 mm. Europe, Turkey *austriacus*

- **Male.** Fore coxae with large tubercle on anterior face, fig. 87, 88. **Female.** Rostrum curved ; antennae comfortably extending to eyes with segment 4 ; distal hemisternites elongate, fig. 68 ; spermathecal gland small, fig. 70. 2.8-4.2 mm. Algeria, Tunisia. *bicolor*

Doydirhynchus austriacus (Olivier)

austriacus Olivier, 1807 : 27 (*Rhynchites*), pl. 81 (2) : 38 (*Attelabus*). – Everts, 1922 : 502 (*Diodyrrhynchus*). – Hustache, 1931 : 470 (*Diodyrrhynchus*). – Porta, 1932 : 330 (*Diodyrrhynchus*). – Hoffmann, 1945 : 172, fig. 375 (*Diodyrrhynchus*). – Grandi, 1951 : 896 (*Diodyrrhynchus*). – Caillol, 1954 : 421 (*Doedycorrhynchus*). – Liebmann, 1955 : 129 (*Diodyrrhynchus*). – Endrödi, 1958 : 10, fig. 6. – Dieckmann, 1974 : 21, 24, fig. 68. – Franz, 1974 : 491 (*Diodyrrhynchus*). – Peez & Kahlen, 1977 : 440 (*Doydirhynchus*). – Pesarini, 1978 : 5, fig. 158 (*Diodyrrhynchus*). – Cmoluch, 1979 : 12, fig. 10-12. – Lohse, 1981 : 113, fig. 2:1. – Ter-Minasyan, 1984 : 110 (*Diodyrrhynchus*).

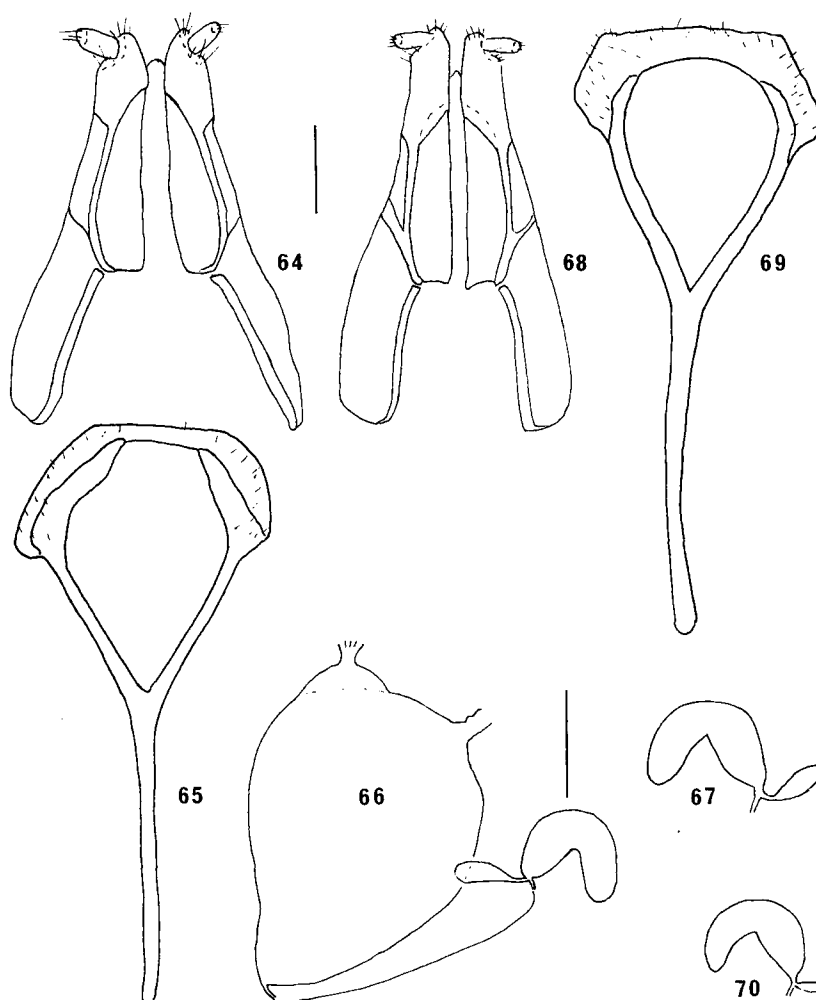


Fig. 64-70, *Doydirhynchus austriacus*, female. – 64, 65, 67, hemisternites, sternite 8 and spermatheca, San Martin, France. – 66, bursa and spermatheca, variant “*karamani*”, Vienna, Austria. *D. bicolor*, female, Chancy, Algeria. – 68-70, hemisternites, sternite 8 and spermatheca. 64, 65, 68, 69 to same scale = 0.2 mm, others to scale = 0.2 mm.

castaneus Germar, 1833 : 242 (as variant ; *Doidyrhynchus*).
cilicicus Bodemeyer, 1900 : 73, 126, 169 (nomen nudum). – Daniel & Daniel, 1903 : 327 (as variant ; *Diodyrhynchus*).
fulvipennis Reitter, 1916 : 260 (as variant ; *Diodyrhynchus*).
karamani Stierlin, 1886 : 229 (*Diodyrhynchus*). **syn. nov.**
lutescens Schilsky, 1903 : 92 (as variant ; *Diodyrhynchus*).
pallidicolor Pic, 1905 : 190 (as variant ; *Diodyrhynchus*).
testaceus Voss, 1932 : 72 (preocc. Pic 1905 ; as variant ; *Diodyrhynchus*).
 For remainder of literature see Dalla Torre & Voss, 1937 : 9.

Yellowish brown to dark brown or black. Pubescence on elytra usually long and coarse, semierect in western populations, often finer and more recumbent in eastern populations. Rostrum in female straight or nearly so in the West, usually slightly more curved in the East. Elytra usually without impression behind proximal quarter, occasionally distinct in the Balkan area. Fore coxae in male without a prominent tubercle on the anterior face but larger specimens occasionally with a swelling in front of the trochanteral insertion.

Male. – Tergite 8 and sternites 8 and 9 as in figure 59. Tegmen as in figure 60, apex of parameres usually emarginate, occasionally truncate or rounded, or lobes uneven, with 1-7 setae on either side (fig. 61). Aedeagus as in figures 57, 58.

Female. – Sternite 8 as in figure 65. Hemisternites as in figure 64 ; spermatheca as in figure 67.

Length 2.5-4.5 mm.

Europe and Asia Minor, specimens from Netherlands, Germany, Russia (to 56N, 38E), France, Spain, Sardegna, Switzerland, Italy, Czechoslovakia, Austria, Hungary, Yugoslavia, Asian Turkey. 858 specimens.

Types. – (1) *austriacus* Olivier : No specimens traceable to Olivier could be found in Paris, Glasgow or Col. Chevrolat in Stockholm. Although named “austriacus” the original description says Germany. A black specimen from Dresden is here chosen as Neotype male, 3.9 x 1.6 mm, Dresden, Coll. Sicard, 1930, MNHN, the genitalia prepared and mounted in balsam on acetate plate. – (2) *castaneus* Germar : Although described from numerous specimens collected on pines in Odenbach, Germany (“e Odenbaci a cel. Muller copiose lectus”), no specimens are in Schoenherr Coll. of Stockholm and only 5 are in Germar Coll. at Halle. These were pinned next to a label saying “var. *castaneus* Meg.” Three are of a uniform pale colour, 1 is of a uniform dark brown, and 1 is of a rusty colour with slightly darker sterna. As the last agrees with the description it is here designated as Lectotype female, 4.0 x 2.05 mm, var. *castaneus* Meg. The previous floating identification label is now pinned with the specimen and a lectotype label with the full original name added, at Martin-Luther-Universität, Wittenberg-Halle. – (3) *cilicicus* Daniel & Daniel : Holotype male, 4.3 x 1.7 mm, Asia minor, Burna, v. Bodemeyer, Coll. O. Leonhard, *Diodyrhynchus* v. *cilicicus* K. Dan., IFPB. Collected near Ivriz at 1200 m on the northern slopes of Bolkar Dagl, Turkey in mid-May 1899. – (4) *fulvipennis* Reitter : Holotype male, 2.7 x 1.2 mm, Sierre [Switzerland, published as “Siarre”], 24 April 1888, *austriacus* v. *fulvipennis* m [ihi], Type, Coll. Reitter, HNHM. – (5) *karamani* Stierlin : A series of specimens from Dalmatia held in different institutions and identified as *D. karamani* could not be recognized as safe syntypes except for one in Stierlin Collection. Lectotype male, 3.5 x 1.45 mm, Dalmatien, D. n. sp. *karamani* m [ihi], Pipitz, Coll. Stierlin, IFPB. – (6) *lutescens* Schilsky : Described from Graz and Geneva. No specimens are presently in Coll. Schilsky, ZMHU and those from other institutions identified as *lutescens* are not from Graz or Geneva, hence no syntype as yet located. – (7) *pallidicolor* Pic : Lectotype female, 3.9 x 1.6 mm, Allier, v. *pallidicolor* Pic [in Pic’s handwriting], Coll. M. Pic, MNHN. – (8) *testaceus* Voss : Holotype female, 4.4 x 1.8 mm, Stiria bor. [northern Steiermark, Austria], Dr. Krauss, *D. karamani* Stierl. f. *testacea* m [ihi], Type, Coll. E. Voss, ZMUH.

Hostplants. – *Pinus halepensis*, *P. pinaster*, *P. sylvestris*, *P. uncinata*.

Remarks. – Well planned fieldwork needs to be carried out to secure sufficient material to ascertain whether just one or more species are involved in the complex. It is impossible to gauge the variation in the species without adequate series of specimens from diverse populations collected on different species of pines as well as on other genera of the family Pinaceae should these also host nemonychids. The structure described by Kleine (1920) as a stridulatory organ was that of the wing folding mechanism.

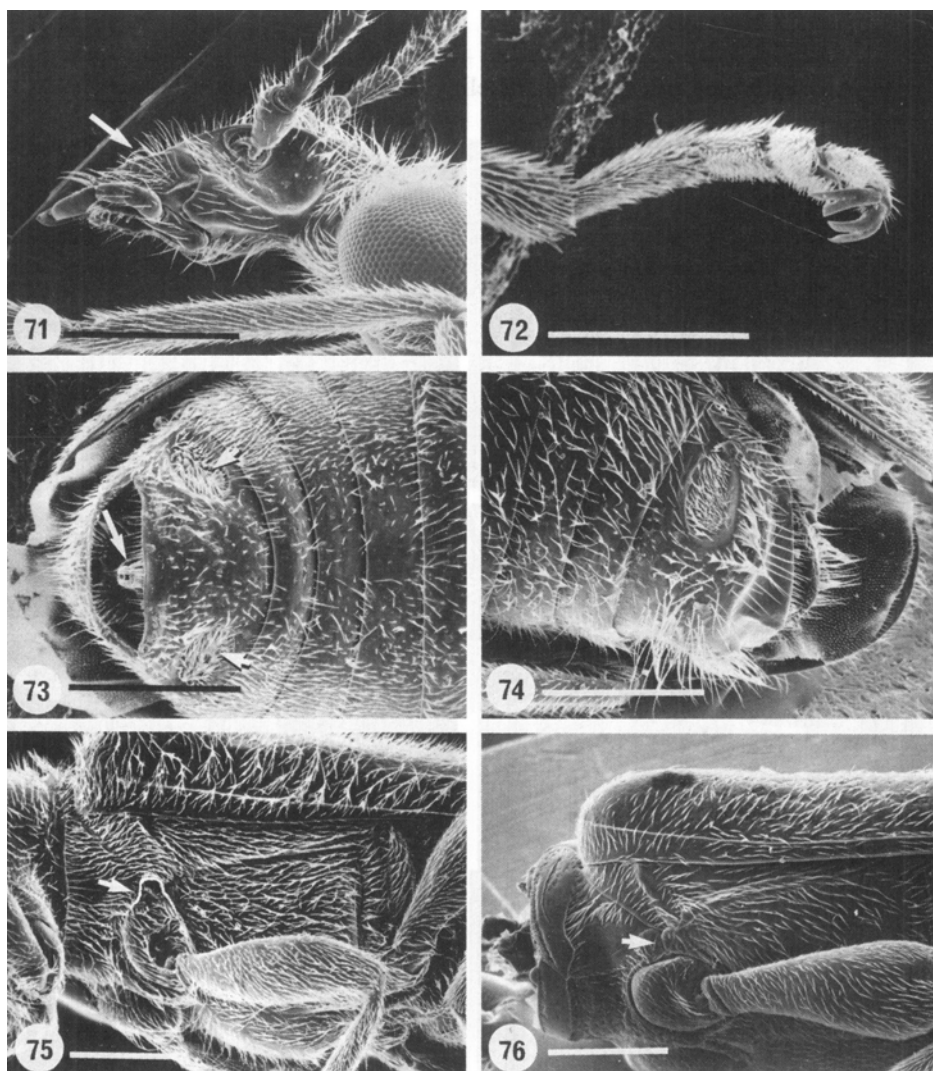


Fig. 71-76, 71, lateral view of head of *Nemonyx lepturoides*, Vienna, arrow pointing at plurisetose mandible and broad, shallow mandibular sockets. – 72, tarsus showing the bifid claws of same. – 73, abdomen of female of *N. semirufus*, Algeria, arrows pointing at setiferous patches and exposed tip of ovipositor. – 74, abdomen of *N. lepturoides* female, Vienna showing left setiferous patch. – 75, lateral view of middle section of body of *N. lepturoides*, Vienna showing mid-coxal cavity open laterally. – 76, same area of body in *Mecomacer scambus* Kuschel, Chile but showing the mid-coxal cavity closed laterally

***Doydirhynchus bicolor* Pic, status nov.**

bicolor Pic, 1905 : 137, 190 (as variant of *austriacus*, *Diodyrrhynchus*).
testaceus Pic, 1905 : 137, 190 (as variant of *austriacus*, *Diodyrrhynchus*).

Yellowish or reddish brown, head, pronotum, metasternum and also abdomen in most males darker. Pubescence on elytra coarse, semierect. Rostrum in female gently curved. Elytra with distinct impression behind proximal quarter. Fore coxae in male with prominent tubercle on anterior face.

Male. – Parameral lobes as in figure 63. Aedeagus as in figure 62.

Female. – Sternite 8 as in figure 69. Hemisternites as in figure 68 ; spermatheca as in figure 70.

Length 2.8-4.2 mm.

Algeria (Chanzy ; Bou Berak near Dellys ; Ain Touta ; Djedi ; Cherchell), **Morocco**

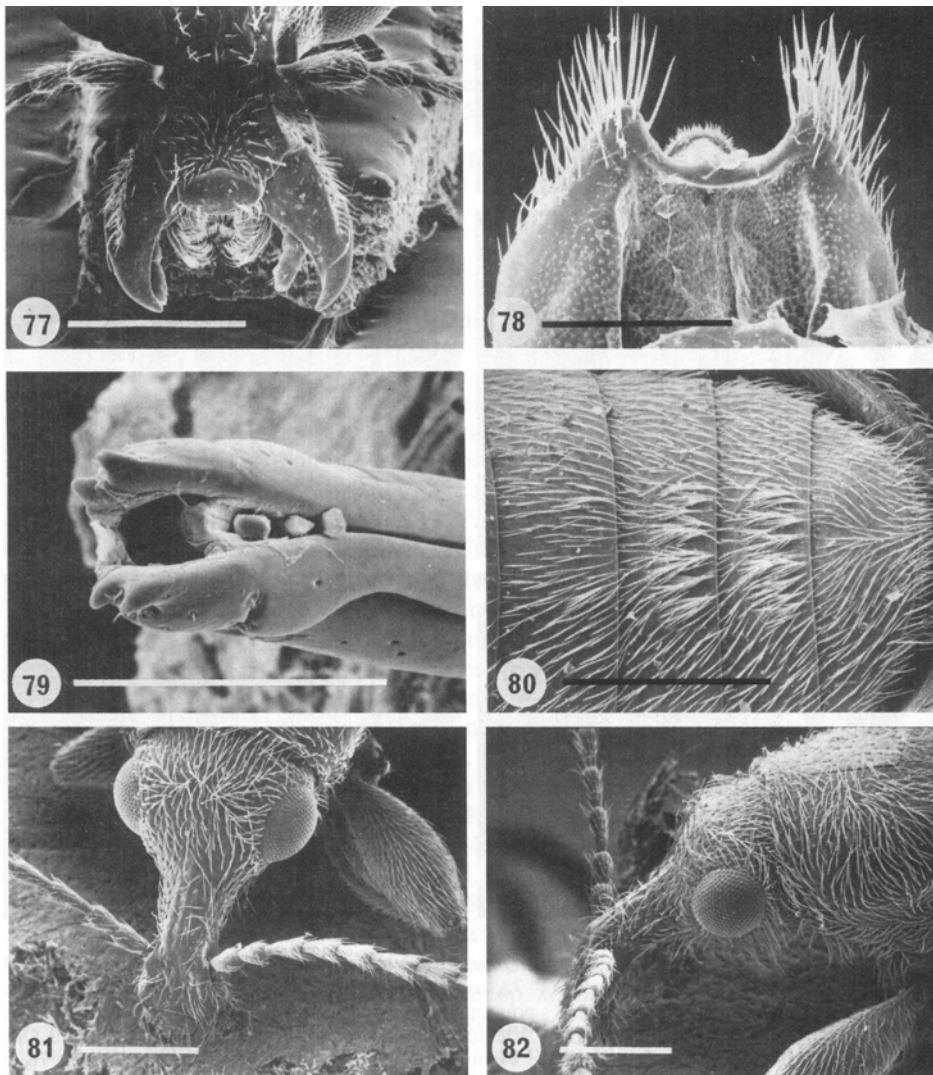


Fig. 77-82, 77, apex of head, *N. lepturoides*, Pécs in Hungary. – 78, dorsal view of tergite 8 of female of same species, France. – 79, apex of ovipositor in ventral view from same specimen from France. – 80, abdomen of female of *Cimberis attelaboides* from Austria with large median setiferous patches on ventrites 3 and 4. – 81, dorsal view of head of same. – 82, lateral view of head of same showing concave curvature between frons and rostrum, condition termed “saddled”. Bars at 77, 80-82 = 0.5 mm, at 78, 79 = 0.1 mm.

(Taourirt near Melilla), **Tunisia** (Le Kef). 177 specimens.

Types. – (1) *bicolor* Pic : Lectotype male, 3.9 x 1.5 mm, Chanzy (Algeria), 1890, de Vaalger, *bicolor* Pic [in Pic's handwriting], Coll. M. Pic, MNHN from a syntype series of 11 specimens, all males, on individual cards. – (2) *testaceus* Pic 1905 : Lectotype female, 3.0 x 1.25 mm, Chanzy (Algeria), 1890, de Vaalger, v. *testaceus* Pic [in Pic's handwriting], Coll. M. Pic, MNHN from a syntype series of 11 specimens, all females.

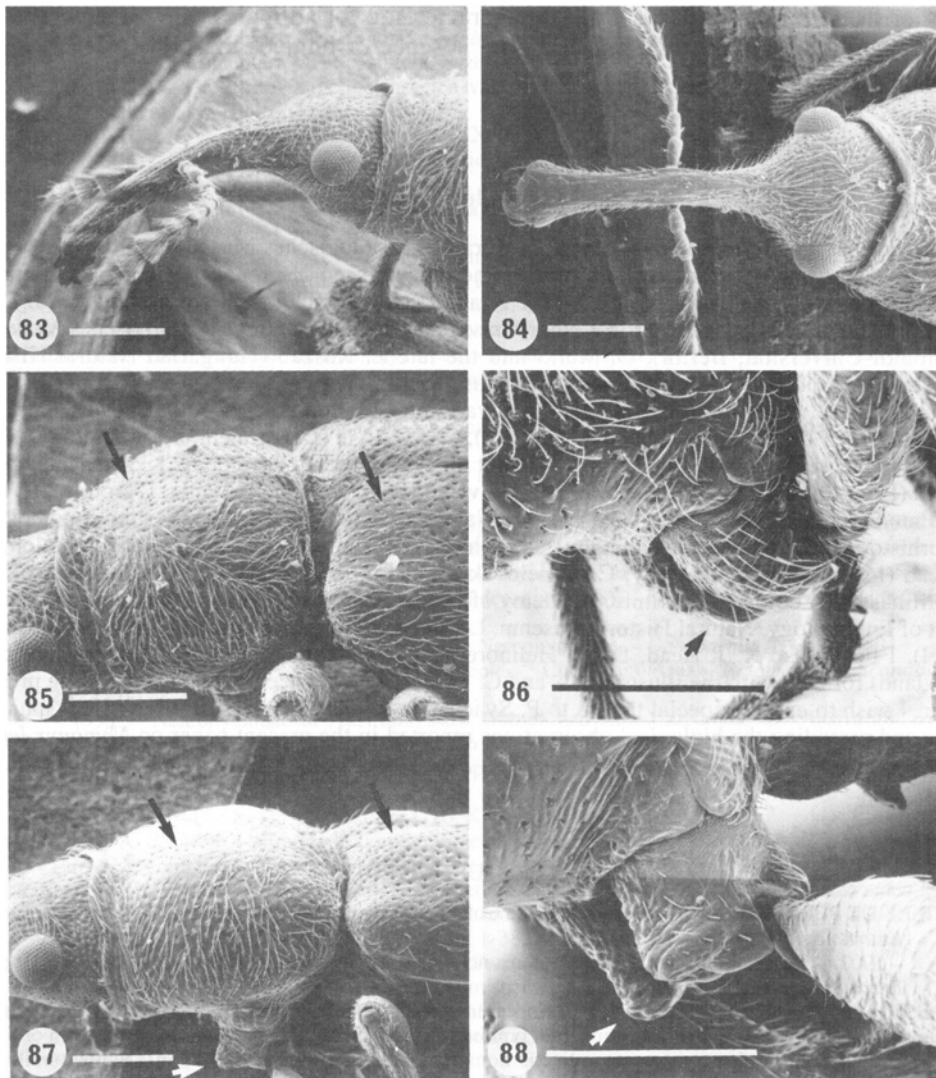


Fig. 83-88, 83, head and anterior section of prothorax in lateral view, *Doydirhynchus austriacus*, France. – 84, dorsal view of same area of same. – 85, prothorax and base of elytra of a male from France, arrows pointing at pronotal punctation and metanotal area. – 86, rounded-off fore coxae in a male of same species, France in lateral view. – 87, prothorax and base of elytra in a *D. bicolor* male from Algeria to compare with figure 85 above. – 88, tuberculate fore coxae in a male of *D. bicolor* to compare with the rounded-off condition of *D. austriacus* shown at figure 86 ; the tuberculate or angulate condition of the coxae apparent also in figure 87. Scale bars = 0.5 mm.

Hostplant. – Unknown but *Pinus pinaster* and *P. halepensis* occur as natives in the area.

Remarks. – Kocher (1961) reports *D. austriacus* from Morocco (Moyen-Atlas nr Ifrane at 1700 m, Taourirt nr Melilla, and Oujda), which were identified by A. Hoffmann and A. Hustache, but none of these specimens have turned up in European institutions. One at the Institut Scientifique at Charia Ibn Batouta, Rabat, could not be sent out on loan (M. Mouna, pers. comm. 4 Apr 1984). As the specimens from Taourirt nr Melilla in the Museo Nacional de Ciencias Naturales, Madrid, identified as *D. austriacus*, became available for examination and turned out to be *D. bicolor*, it is assumed that also the other Moroccan specimens were of this species. Two males from Djelfa, Algeria in Coll. G. Ruter at MNHN are nearly black and unusually large, 4.4-4.5 mm. The tubercle on the anterior face of the fore coxae which is characteristic for all males of *D. bicolor* is scarcely discernible on these two males. In the absence of females these large black specimens are left unidentified for the present.

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