

**NOTES ABOUT THE EUROPEAN FOSSIL LEPTURINAE
AND THE DESCRIPTION OF A NEW SPECIES
(Coleoptera, Cerambycidae, Lepturinae)**

Francesco VITALI*

* Corso Torino 5/7, I-16129 Genova, Italia

Abstract: New observations on *Pseudosieversia europaea* Vitali, 2004 (Baltic, Eocene) are added to the original description. A new fossil species, *Paracorymbia antiqua* nov. sp. (Baltic, Eocene) is described. The belonging to this genus, today widespread in Mediterranean, and its relationships with related taxa of the Recent are discussed; hypotheses of the palaeological history of this species and related ones are provided. *Leptura? bartoniana* Cockerell, 1920 (Bartonian, Eocene) is compared with closely related taxa of the Recent, especially with *Stictoleptura scutellata* (Fabricius, 1781), and it is transferred to *Melanoleptura* Miroshnikov, 1998, here considered subgenus of *Stictoleptura* Casey, 1924: *Stictoleptura (Melanoleptura) bartoniana* (Cockerell, 1920) nov. comb. Motivations of the past and the recent spread of these and related taxa are explained. Taxonomic position of *Strangalia berendtiana* Zang, 1905 (Baltic, Eocene) and of *Leptura longipennis* Statz, 1938 (Rott, Middle Oligocene) are discussed.

Key-words: Coleoptera, Cerambycidae, Lepturinae, Rhagiini, Lepturini, *Pseudosieversia*, *Paracorymbia*, *Stictoleptura*, *Leptura*, *Strangalia*, fossil, new species, new combination.

Introduction

Lepturinae fossils are rarely preserved. At first ZANG (1905) described *Strangalia berendtiana* from Baltic amber. Later KREBS (1910) reported some taxa from its Baltic amber collection recognised by E. Reitter as representatives of the genera *Pachyia*, *Grammoptera* and *Strangalia*. Afterwards WICKHAM described several species belonging to the genera *Gaurotes*, *Pidonia*, *Grammoptera*, *Judolia* and *Leptura* on fossil shales of the Lake Florissant (Colorado, USA). Because of their conserving conditions such species are mostly considered as doubtful (LINSLEY, 1961). The same considerations can be done for two single elytra that COCKERELL (1920) and STATZ (1938) described as *Leptura* on fossils deposited on European shales. Nevertheless, deeper analyses presented by them allow to clarify the taxonomic status of COCKERELL's species. VITALI has recently described a new fossil species from the Baltic amber belonging to a genus today widespread in Far Eastern Asia (*Pseudosieversia europaea*, Vitali 2004). In this paper are reported new observations about the already described European Lepturinae-species and a new one is described.

The geological dates agree with the GeoWhen Database of the Physics Department, University of California at Berkeley (USA), according to the 2004 time scale endorsed by the International Commission on Stratigraphy.

Pseudosieversia europaea Vitali, 2004 (Fig. 1)

Deeper observations on the amber where the holotype is conserved have allowed to observe some "stellate hairs". Such minute inclusions are structures deriving from the perigonium of oak male flowers (WEITSCHAT & WICHARD, 2002). They can be normally found in half of the Baltic amber. They confirm the first hypothesis that such cerambycid lived in mixed-forests.

In August 2004 I bought from the amber seller Carsten Gröhn (Glinde, Germany) a female specimen certainly attributable to *Pseudosieversia europaea*. Different conservation conditions of this fossil allow to add new observations to its original description.

Length 5,6 mm (holotype: 5,9 mm); coloration not well definable, apparently lead-black; pronotum transverse; scutellum wider than long, rounded posteriorly, apparently unpunctuated; elytra 2,6 times longer than the total width (holotype: less than 3 times

longer than wide), covered by several but irregular, long, isolated hairs; pygidium posteriorly truncated.

Feminine genital armature evaginated, scarcely longer than the abdomen; coxite rectangular, massive, short, one-fourth longer than wide, covered by scarce and very fine pubescence at the exterior side and provided with a longer, isolate hair at the apex of the interior margin; stylus apical, drop-shaped, rounded at the apex, three-fifths as long as the coxite, one-half as wide as the coxite.

Hind femur as long as the tibia; tibiae armed with a short apical tooth; hind tarsus one-half the length of the tibia, 1st tarsomere very long, 2nd tarsomere one-third as long as the first, 3rd tarsomere bilobed, deeply incised, one-sixty as long as the first, onychium one-third as long as the first.

The coloration of this specimen seems to confirm that the colour of the living beetle was true black. Also at this specimen, the elytral hairs appear to be the rest of a more extensive but not thick pubescence. The elytral ratio length/width is equal (2,6) to that of the females of *Pseudosieversia rufa* (Kraatz, 1879) and analogue (2,5) to that of *P. shikokuensis* Hayashi, 1959, while it is wider (2,3) than that of *Sivana bicolor* (Ganglbauer, 1886). The feminine genital armature is different from that of the *Pidonia*-species (KUBOKI, 2003). In conclusion, all such characters seem to confirm the belonging of this species to the genus *Pseudosieversia*.

***Paracorymbia antiqua* nov. sp.** (Fig.2-5)

Length 9 mm, stout, even above; without apparent coloration, except for the unicolour, brownish black antennae. Probable habitus of the living beetle: all black except for the testaceous elytra.

Head short, convex; forehead transverse, largely grooved; antennal tubercles widely separated, scarcely elevated; cheeks well developed, one-half higher than long; temples short, one-half shorter than the cheeks, rounded, very convergent backward; surface covered with an almost fine, dense puncturing and with a dense, short, semi-recumbent pubescence above; underside covered with sparse, very long, erect setae; neck distinct, coarsely, densely punctured. Mouth pieces difficulty visible; palpi brownish black. Eyes widely separated from the basis of the mandibles, big, emarginated at the upper side, uniformly convex at the under one, finely faceted; surface apparently marbled, likely all black in the living beetle.

Antennae unicolour, brownish black; not reaching the two-thirds of elytral length; finely, densely punctured, glabrous, carrying few, short setae at the apex of each antennomere; scape a little bowed, its apex obliquely truncated; pedicel as long as broad, one-third as long as the scape; antennomeres III-IV sub-equal, a bit longer than the scape; antennomere V one-third longer than the scape; antennomere VI a bit shorter than the scape; antennomere VII one-third shorter than the scape; antennomeres VIII-X sub-equal, one-half as long as the scape; antennomere XI elongate, straight, pointed, not sub-articulate, one-third shorter than the scape.

Prothorax slightly wider than long, convex above; almost bell-shaped, widely constricted anteriorly, a little constricted at the basis, sides regularly rounded, hind angles rounded; apex finely grooved, basis even more finely grooved. Surface densely, coarsely punctured at the sides and at the basis, almost transversally wrinkled anteriorly, much more sparsely and finely punctured on the disk. Moreover, covered with a fine, short, semi-recumbent pubescence; each hair shorter than the distance between each point on the disk. Scutellum shaped like an equilateral triangle.

Elytra short, 1,7 times longer than total width; basis clearly wider than the pronotum, depressed at the middle; sides regularly convergent backward, almost parallel until the half of their length; apex separately, obliquely truncated, outer angle nearly rounded; epipleurae well visible behind the humeri until the apex, suture very finely grooved; surface covered with a coarse, almost thick, irregular punctuation and with a short, recumbent, black pubescence, well visible only on the elytral apex. Right elytron missing.

Prosternum very finely punctured, intercoxal process very thin; metasternum apparently unpunctuated, covered by very dense, short pubescence; abdominal sternites (5), progressively shorter toward the tip, covered by dense, short pubescence; pygidium convergent-sides, longer than the other visible sternites, even though deformed in this specimen.

Feminine genital armature evaginated, as long as the abdomen; coxite curved, club-shaped, three times longer than wide; stylus apical, triangular, truncate at the apex, scarcely longer than wide, one-thirdly as long as the coxite, evidently narrower than the coxite, at the apex provided by few (4) hairs, one-half as long as the stylus.

Legs short, femora slightly club-shaped, tibiae linear, rectilinearly truncated at the tip; surface very finely, thick punctured and densely, finely pubescent. Tarsi short; first joint of the hind tarsi as long as the following three together, 2nd, 3rd and onychium sub-equal, one-third as long as the first.

Holotype: female, Oriental Baltic Coast, ex coll. C. Gröhn (Author's coll.). True *patria*: Scandinavia, Eocene (56-34 Myr BP).

Differential diagnose

Paracorymbia antiqua has typical characters of genera more primitive than *Paracorymbia* Miroshnikov, to which it is probably related. Large scutellum and general habitus remind us of *Vadonia* Mulsant while the temples and the size of the antennomeres are typical of *Pseudovadonia* Lobanov & alii.

Such and other characters, like the convex under margin of the eyes and the short pubescence on the pronotum and on the antennae, may be simply interpreted as archaic. Nevertheless, the shape of the pronotum (transverse and constricted by a furrow at the front margin) and of the elytra (stout and truncated at the apex) are specialised characters typical of *Paracorymbia*. Moreover, its female genitalia are analogue to the ones of the extant *Vadonia* and *Paracorymbia* but very different from the ones of *Pseudovadonia* (with sub-apical styli). Therefore, this species is here interpreted as *Paracorymbia*, even though quite archaic, and as a probable link between ancestor genera.

P. antiqua has some characters analogue to the extant congeners of the *pallens*-group: elytral apex smoothly dentate, last antennomere more elongated and slightly subarticulate. The elytra were likely uniformly testaceous, like the species of this group and of other more archaic taxa. The antennae look to be monochromatic like the ones of the *fulva*-group and of more archaic taxa; therefore, this character too is interpreted as primitive.

Probable biology

Finely faceted eyes and taxonomic position suggest a diurnal phenology, likely on flowers. Apiaceae and Rosaceae have been found in Baltic amber (WEITSCHAT & WICHARD, 2002); therefore, the adults probably frequented the same flowers of their extant congeners. The inclusion in amber usually indicates the presence in coniferous forests, but this amber includes some stellate hairs. This fact suggests that the larval stages of this longhorn were probably related to trees of temperate mixed-forests (*Pinus*, *Picea*, *Abies*, *Fagus*, *Quercus*, *Castanea*) such as their congeners of the Recent. The biology of this species also suggests the existence of temperate (rather than subtropical) forests. In conclusion, *antiqua* was a late settler of the Baltic forest, which probably lived during the Late Eocene (~37-34 Myr BP).

Remarks

The Lepturini characterised by anteriorly constricted pronotum, with hind angles rounded and truncate elytral apex have been subject to several studies. The association with the American genus *Brachyleptura* Casey done by VILLIERS (1978) has been criticised by SAMA (1988) and by some following authors, since it does not correspond to natural groups. He has proposed the provisory merging in only one genus (*Corymbia* Des Gozis). Nevertheless, this condition too is unsatisfactory since it includes species clearly not-related regarding larval characters (VITALI, 1999).

MIROSHNIKOV'S (1998) taxonomic introductions have allowed to separate *Paracorymbia* as a genus well characterised through its stout shape and its genital characters. He has introduced *Batesiata* too (genotype: *Leptura tessera* Charpentier, 1825) as subgenus of *Paracorymbia*, including the Japanese *Leptura pyrrrha* Bates, 1884. Nevertheless, this solution also looks incorrect since *Batesiata* has larvae with seven ambulatory ampullae instead of six like other *Paracorymbia*-species (KLAUSNITZER, 1997). For this character *Batesiata* is more related to *Stictoleptura* Casey. DANILEVSKY (2002) has considered *Melanoleptura* Miroschnikov as subgenus of *Paracorymbia*. Such solution is also incorrect since the larva of *Melanoleptura* also has seven ambulatory ampullae. More recently, SAMA (2002) has merged in *Stictoleptura* all genera characterised by larvae with seven ambulatory ampullae: *Stictoleptura*, *Aredolpona* (= *Corymbia*), *Melanoleptura* and *Batesiata*.

The position of *Leptura pyrrrha* remains doubtful. For the genital characters MIROSHNIKOV (1998) considered it as belonging to *Batesiata*, even though its geonomy (Japan) and its habitus are very different from the typical *Batesiata*. Moreover, SAMA (2002) did not consider this species in his work. The habitus of *pyrrrha* reminds us of some *Paracorymbia*-species, such as *simplonica* (Fairmaire, 1885); nevertheless, its monochromatic short antennae and its bell-shaped pronotum are analogue to that of *antiqua*. This fact suggests that *pyrrrha* has independently evolved in Japan from ancestors coming from the Baltic. Therefore, *pyrrrha* could be provisionally considered as belonging to *Paracorymbia*, even though it probably belongs to another new subgenus.

The characters of *antiqua* suggest that *Paracorymbia* evolved through *Vadonia*, perhaps from ancestors attributable to archaic *Anoplodera*. This seems also confirmed by the habitus of the male genitalia (MIROSHNIKOV, 1998). Moreover, the recent discovery (PESARINI & SABBADINI, 2004) that *Vadonia aspoecorum* Holzschuh, 1975 is a hybrid between a *Vadonia* and a *Paracorymbia*-species confirms the close relationships between such genera. Nevertheless, specialised characters evolved in extant species hide traces of such evolution.

The *Pseudovadonia*-characters (male and female genitalia, bifurcate scutellum, antennae thickened) suggest that such genus evolved paraphyletically, even though it has common, archaic characters. On the contrary, it looks more related to *Pseudalosterna* Plavilstshikov, *Kanekoa* Matsushita & Tamanuki, *Trigonarthys* Haldeman and *Konoa* Matsushita.

Presently, *Paracorymbia* merges species characterised by stout elytral apex and bicolour antennae (*pallens*-group) and others characterised by dentate elytral apex and unicolour antennae (*fulva*-group). Most species of the *pallens*-group have archaic characters (obtuse elytral apex, simple coloration) but certainly they are not ancestor of *Stictoleptura* for some too specialised characters (stout habitus, bicolour antennae, larvae with six ampullae). Therefore, *Paracorymbia* should be considered paraphyletic with respect to *Stictoleptura*.

On the contrary, the *pallens*-group looks closely related to *Brachyleptura*. This American genus evolved more or less dehiscent elytra, but all species have bicolour antennae like that of the *pallens*-group. It is likely an Alleghenian element, directly descendent from the Tertiary Laurasian Fauna of the deciduous subtropical forests. Nevertheless, their larvae also have seven ampullae (CRAIGHED, 1923). This means that also *Brachyleptura* should be considered paraphyletic with respect to *Paracorymbia* and that their relationship should be referred to Trans-Atlantic bridges of the Early Eocene or even of the Paleocene.

Finally, the presence of archaic *Paracorymbia*-species in Baltic mixed-forests during the Eocene suggests that such genus is not original from the Balkans or Turkey (such as its current geonomy could suggest) but it evolved in the Northern Europe. The presence of extant, relatively archaic species (*pallens*-group) in the Mediterranean seems due to the southward restriction of the original temperate areal occurred during the glacial Ages. The presence of *pyrrrha* in Japan could be explained by the eastward displacing of the Tertiary forests occurred in the late Tertiary (CHEREPANOV, 1990).

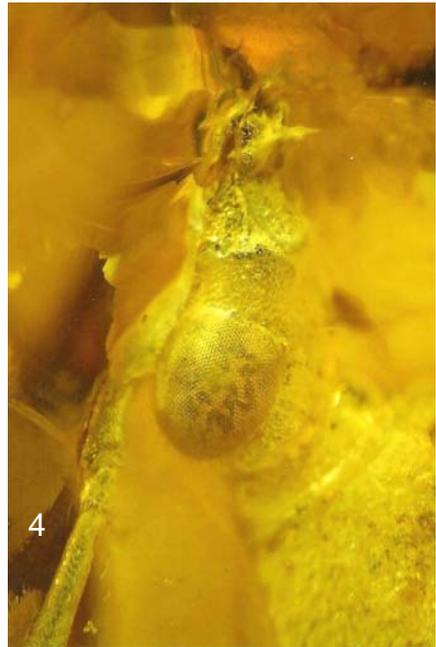
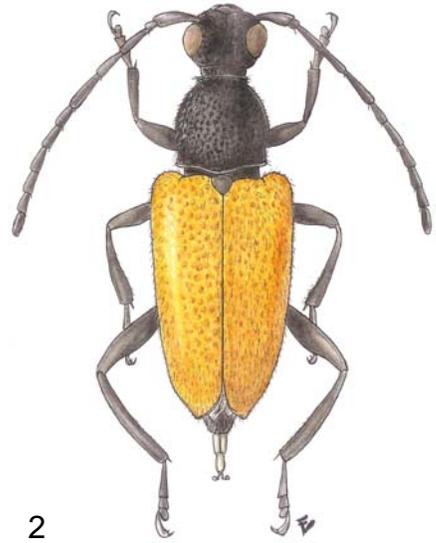


Fig. 1. *Pseudosieversia europaea* Vitali, 2004 fem. Fig. 2. *Paracorymbia antiqua* n. sp., fem., reconstruction of the probable habitus of the living beetle. Fig. 3. ditto, in amber stone. Fig. 4. ditto, head.

Stictoleptura (Melanoleptura) bartoniana* (Cockerell, 1920) nov. comb.Leptura?* *bartoniana* Cockerell, 1920 (Fig.6)

This species was described on the basis of a single, incomplete, right elytron (apex missing) found near Creech (England, Dorset) in the Corfe clay (Bartonian stage, Early Bagshot beds).

Even if at the time current *Leptura* were classified as *Strangalia*, such elytron should not belong to the genus *Leptura*, as it is considered today. In fact, no extant *Leptura*-species have the elytral surface coarsely punctured only in the basal haft.

According to the original description this fossil belongs to the Bartonian stage (Middle Eocene, 40-37 Myr BP) but it is included in the Early Bagshot (Late Eocene Early beds, 37-34 Myr BP). Therefore, it is doubtful whether *bartoniana* had lived in Middle or in the early Late Eocene.

According to several authors (GARDNER, 1879; 1982; REID, 1896; CHANDLER, 1960; 1962), the climate of Southern England was subtropical during the Middle Eocene: the presence of deltaic plants and fossil alligators indicates habitats similar to the ones of Indochina or Florida. Until this epoch Britain and North America were more or less connected by earth bridges and they had also a fauna with common origins (Laurasian Fauna). Nevertheless, since the Late Eocene the climate tended to become more temperate, probably in connection with the disjunction between America and Eurasia. This milder climate dominated until the Miocene, then it became even colder and the subtropical biocenosis was definitely destroyed by the Pleistocene glaciations. Instead the longitudinal disposition of the American mountains allowed the survival of the subtropical biocenosis to the Recent. Relicts of such biocenosis and of their descendants are widespread mostly in the Eastern North America and constitute the Alleghenian Fauna.

Extant Lepturinae of such Fauna could be compared with *bartoniana*, but it does not show similarity with any of them. A little resemblance in the shape and the puncturing can be found in *Brachyleptura*, which differs from it for some more specialised (stout habitus, elytra almost dehiscent) and more primitive (uniform puncturing) characters. Since *bartoniana* has contemporarily more archaic and more specialised characters, it should be considered paraphyletic with respect to this genus. In conclusion, *bartoniana* belongs to a genus not present in Alleghenian and similar, but paraphyletic, with respect to *Brachyleptura*.

Only one Eurasian genus, *Stictoleptura*, has such characteristics. Already in its original description, *bartoniana* was compared to *Stictoleptura canadensis* (Olivier, 1795). Actually, it shows the closest resemblance with the European *Melanoleptura scutellata* (F., 1781), the only Lepturini-species with elytra coarsely punctured in the basal half. The particular elytral puncturing and the genital characters indicated by MIROSHNIKOV (1998) allow to separate *Melanoleptura* as a valid taxon, but here it is considered as only a subgenus of *Stictoleptura*. However, *bartoniana* does not show evident differences with respect to *scutellata*; thus, it is transferred to the genus *Stictoleptura*, subgenus *Melanoleptura*.

Probable biology

Stictoleptura can be divided in species of which the larval stages are only related to the conifers (*rubra*, *succedanea*, *canadensis*) and species (among them *scutellata*) related to broadleaf trees (occasionally also to pines). Only few species (*variicornis*, *cordigera*) can not be included in this schema.

The first group is widespread in the Holoarctic, having three species in Palaearctic and one in Vancouverian. Their spread is almost uniform in cold lands and relict in mountain habitats of warm lands. The adults frequent flowers and the numeric consistence of specimens is almost elevate. The second group is present only in the Western Palaearctic (mostly in the Mediterranean) with several species (*erythroptera*, *trisignata*, *palmi*, *fontenayi*, *tangeriana*) characterised by more or less relict areal and rare spread. The adults frequent mostly the trunks of the hosts, rarely the flowers. Such species are related to sclerophyll (*Quercus ilex*, *Q. pubescens*, *Q. coccifera*), to temperate (*Populus*,

Betula-Pinus, Fagus, Corylus, Aesculus, Alnus, Ulmus) or even to subtropical Tertiary plants (*Laurus, Eucalyptus*). This group may be considered more archaic for many characters: adult behaviour not-related to flowers (such as archaic Rhagiini), larval stages related to deciduous trees (Tertiary species), wider number of species, almost relict spread.

The lack of species related to *bartoniana* in Alleghenian suggests that it should not be referred to the subtropical biocenosis of the Middle Eocene but to the temperate one of the early Late Eocene. The dependence of *scutellata* on *Fagus* (a Tertiary temperate tree) indicates the primitiveness of this species. In North Africa (where *Fagus* is lacking) it is related to sclerophyll oaks (VILLIERS, 1946), showing the adaptation to xerothermic habitats that its congeners have found in the Mediterranean. Therefore, biological speculations too could confirm the similarity between *bartoniana* and *scutellata*.

In conclusion, *bartoniana* was carried in England through temperate forests when it was no longer able to reach America. Its larva was likely related to *Quercus, Populus* and other deciduous trees found in Bartonian beds. The adult probably frequented the trunks of the hosts in day-time, such as its more archaic, extant congeners. This species, or its probable descendants, probably lived in England until the Quaternary glacial Ages. Perhaps some of them adapted themselves also to the coniferous forests dominating in England from the Miocene, but their traces are lost today.

Hypothesis of the past spread of the genus *Stictoleptura*

The evidence of the fossil findings indicates that species attributable to *Stictoleptura*, like *Paracorymbia*, evolved in Europe already during the Eocene. Even if not documented by palaeological proves, it is possible to trace the probable palaeohistory of *Stictoleptura* through past epochs.

Temperate forests began to dominate in Britain and in the Northern Europe in the Late Eocene, in the Middle Europe from the Early Miocene. In xerothermic, coastal habitats of the Southern Europe, sclerophyll forests substituted subtropical ones, constituting also refuges for some relict species (*Laurus, Ficus*, palms). Such forests became dominant in Europe during the aridity crisis of the Messinian (Late Miocene). Archaic *Stictoleptura* too dominated in European temperate forests during the Miocene, while they adapted themselves to the sclerophyll forests of the Mediterranean coast. Such adaptation became important during the Late Miocene. From the Pliocene, the climate became quickly colder and the coniferous forests began to be more and more widespread, until they came to dominate during the Pleistocene glacial Ages. Probably from the Pliocene, some *Stictoleptura* already adapted to conifers began to widespread. During the Pleistocene, ancestors probably similar to *Stictoleptura variicornis* (Dalman, 1817) were able to colonise America through Bering, evolving *Stictoleptura canadensis* (Olivier, 1795).

“*Leptura*” *longipennis* Statz, 1938

This species was found near Rott (Germany, Rheinland) in Middle Oligocene shales. It consists of two elytra and one leg, supposed to be a hind one. It was described as *Leptura* “in weiterer Sinne” and its author provided a picture of that.

The elytra are 16,3 mm long, scarcely restricted posteriorly, with apex obtusely truncated (feebly sinuate in the picture), unpunctuated, finely and densely pubescent, reddish brown, darker along the front side of the suture. The tarsus is shorter than the tibia, the tibia is a bit shorter than the femur.

These elytra certainly indicate that *longipennis* belongs neither to the genus *Leptura* as it is considered today nor to genera characterised by dentate elytral apex, such as *Strangalia, Pedostrangalia* and *Stictoleptura*. The description matches better to some Rhagiini and to archaic Lepturini likely already present during this epoch, such as *Pseudosieverisia, Pidonia, Cortodera, Anoplodera* and *Vadonia*. The dark front side of the suture may suggest a resemblance with *Vadonia*; nevertheless, it is hard to attribute with certainty this fossil to the genera of the Recent.

***Strangalia berendtiana* Zang, 1905 (Fig. 7)**

Even though it was not possible to check the holotype, its original description and a good drawing provided by its author allow to draw some conclusions. Since it is about a very rare paper, this drawing is reproduced here.

At that time, almost all Lepturini were classified as *Strangalia* or *Leptura*, but this species seems to really belong to the genus *Strangalia* as it is considered today. In fact, despite its almost massive habitus, its elytra not-constricted in the middle and the relative shortness of its abdomen, legs and tarsi, this fossil has some typical *Strangalia*-characters. According to the description, *berendtiana* has antennae as long as the body, hind tibiae as long as the femora and tarsi a bit shorter than the tibiae. Moreover, ZANG'S drawing shows a pronotum without front constriction and the 3rd joint of hind tarsi very elongated, hardly longer than the 2nd one, a bit shorter than the 1st one, incised only at the tip. Especially such elongate tarsomere allows to identify *berendtiana* as a *Strangalia*-species.

Further investigations for a possible collocation among other related Oriental genera are presently impossible. Moreover, *berendtiana* should not be directly related to the only extant congener in Europe. In fact, *Strangalia attenuata* (L., 1758) is an Eurasian species closely related to the Oriental ones. This fact suggests an Asiatic provenience related to some Interglacial Age. Its presence in Corsica suggests a presence in Europe anterior to 500.000 BP; therefore, the arrival of *attenuata* in Europe may be dated during the Early or the Middle Pleistocene. On the contrary, LINSLEY (1961) considered *Strangalia* as an Alleghenian element and still today such genus colonises tropical lands, such as the Antilles. Moreover, *berendtiana* has a pattern formed by three bands like some American (and not Asian) congeners. This means that *berendtiana* may be really related to the genus *Strangalia* especially with the American species. The evidence of fossil findings suggests that species identifiable as *Strangalia* were already widespread in Laurasia during the Eocene and therefore, the emergence of this genus occurred almost in the Paleocene (65-56 Myr BP). In the Eocene were already evolved most, or perhaps all, Lepturini-genera currently present in Europe. Moreover, since *Strangalia* is a very specialised genus among the Lepturini, the evolution of this tribe already occurred during the Secondary Era.

Acknowledgement

The Author is very grateful for the kind collaboration to complete this paper to Dr. Juliane Diller (Munich), to Dr. Charyn Micheli (Washington), to the Library of the Zoological Museum of Munich and to the Libraries of the Smithsonian Museum (Washington).

Bibliography

- CHANDLER M.E.J., 1960. Plant remains of the Hengistbury and Barton Beds. - *Bulletin of the British Museum (Natural History), Geology*, 4, 191-238.
- CHANDLER M.E.J., 1962. The Lower Tertiary Floras of Southern England. 2. Flora of the Pipe-clay Series of Dorset (Lower Bagshot). - *British Museum (Natural History), London*.
- CHEREPANOV A. I., 1990. Cerambycidae of Northern Asia. Prioninae, Disteniinae, Lepturinae, Asemi-nae. - *E. J. Brill Ed., New Dehli*, 642 pp.
- COCKERELL T. D. A., 1920. Fossil arthropods in the British Museum. II. - *Ann. Mag. Natur. History*, 9, 5, 455-463.
- CRAIGHED F. C., 1923. *North American Cerambycid larvae. A classification and the biology of North American Cerambycid larvae*. - Ottawa, 150 p. + XLIII pl
- DANILEVSKY M. L., 2002. Systematic list of longicorn beetles (Cerambycoidea) of the territory of the former USSR. - Electronic version, last updated 27 January 2002.
- GARDNER J. S., 1879a. Description and correlation of the Bournemouth Beds. Part 1. Upper Marine Series. - *Quarterly Journal of the Geological Society, London*, 35, 209-228.
- GARDNER J. S., 1879b. On the correlation of the Bournemouth Marine Series with the Bracklesham Beds, the Upper and Middle Bagshot Beds of the London Basin, and the Bovey Tracey Beds - *Geological Magazine*, 6, 148-154.
- GARDNER J. S., 1882. Description and correlation of the Bournemouth Beds. Part 2. Lower or Freshwater Series. - *Quarterly Journal of the Geological Society, London*, 38, 1-15.

- KLAUSNITZER B., 1997. Die Käfer Mitteleuropas, Band 4: Polyphaga Teil 3. - *Goecke & Evers im Gustav Fischer Verlag, Jena*, 370 pp.
- KLEBS R., 1910. Über Bernsteineinschlüsse in allgemeinen und die Coleopteren meiner Bernsteinsammlung. - *Schrift. Physik-Ökonom. Ges.*, 51: 217-242.
- KUBOKI M., 2003. A new subgenus of the genus *Pidonia* Mulsant (Coleoptera Cerambycidae). - *The entomological revue of Japan*, 58 (1): 1-6.
- LINSLEY E. G., 1961. The Cerambycidae of North America. Part I. Introduction. - *University of California Press, Berkeley and Los Angeles*, 135 pp.
- MIROSHNIKOV A. I., 1998a. A new classification of longicorn beetles of the *Anoplodera* complex, Tribe Lepturini (Coleoptera, Cerambycidae) of Holarctic fauna, I. - *Entomologicescoe Obozrenie*, LXXVII (2): 384-420.
- MIROSHNIKOV A. I., 1998b. A new classification of longicorn beetles of the *Anoplodera* complex, Tribe Lepturini (Coleoptera, Cerambycidae) of Holarctic fauna, II. - *Entomologicescoe Obozrenie*, LXXVII (3): 587-615.
- PESARINI C. & SABBADINI A., 2004. Descrizione di due nuove specie di Lepturini di Grecia, note sulle specie affini e considerazioni sistematiche, sinonimiche e nomenclatoriali (Coleoptera Cerambycidae). - *Boll. Soc. entomol. ital.*, 136 (2): 157-172.
- REID C., 1896. *Quarterly Journal of the Geological Society, London*. LII, p. 490
- SAMA G., 1988. Fauna d'Italia, vol. XXVI: Coleoptera Cerambycidae (Catalogo topografico). - *Ed. Calderini, Bologna*, 216 pp.
- SAMA G., 2002. Atlas of the Cerambycidae of Europe and the Mediterranean Area. I: Northern, Western, Central and Eastern Europe. British Isles and Continental Europe from France (excl. Corsica) to Scandinavia and Urals. - *Kabourek, Zlin*, 173 pp., 36. pl.
- STATZ G., 1938. Fünf neue fossile Cerambyciden-Arten aus den mitteloligocänen Ablagerungen von Rott am Siebengebirge. - *Ent. Bl*, 34: 173-179.
- VILLIERS A., 1946. Faune de l'Empire français, V: Coléoptères Cérambycides de l'Afrique du Nord. - Office de la recherche scientifique coloniale, *Ed. du Muséum, Paris*, 153 pp.
- VILLIERS A., 1978. Faune des Coléoptères de France, I: Cerambycidae. *Encyclopédie Entomologique*, vol. XLII, *Ed. Lechevalier, Paris*, 611 pp.
- VITALI F., 1999. Nuovi dati corologici per alcune specie di cerambycidi italiani (Coleoptera, Cerambycidae). - *Doriana*, VII (315): 1-6.
- VITALI F., 2004. *Pseudosieversia europaea* new species from Baltic amber (Coleoptera, Cerambycidae, Lepturinae). - *Les Cahiers Magellanes*, 35: 1-8.
- WEITSCHAT W. & WICHARD W., 2002. Atlas of Plants and Animals in Baltic Amber. - *Verlag Dr. Friedrich Pfeil, München*, 256 pp.
- ZANG R., 1905. Coleoptera Longicornia aus der Berendtschen Bernsteinsammlung. - *Sb. der Ges. naturf. Fr. Berlin*, 1905: 232-245.

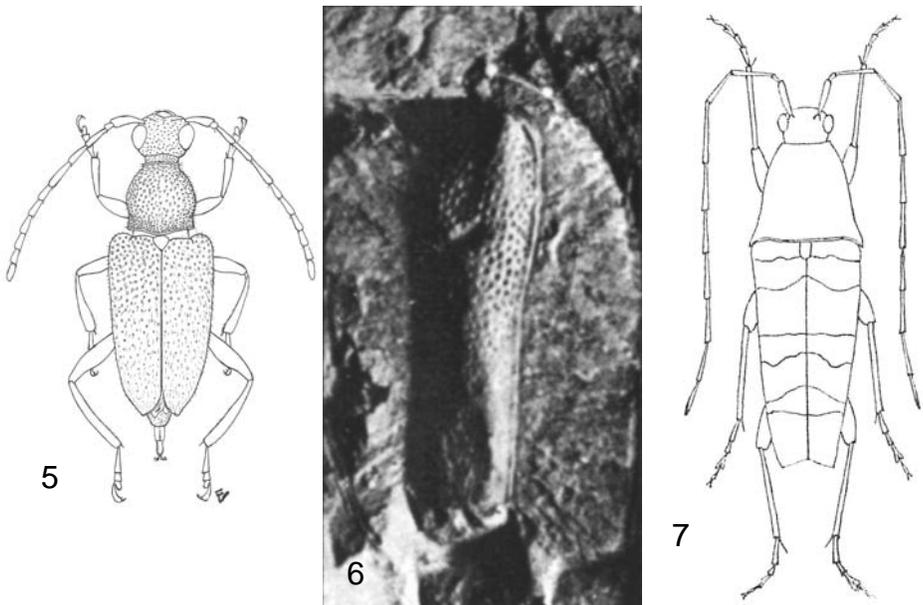


Fig. 5. *Paracorymbia antiqua* nov. sp., ♀, habitus. Fig. 6. *Stictoleptura bartoniana* (Cockerell, 1920), original picture. Fig. 7. *Strangalia berendtiana* Zang, 1905, original drawing.