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Torneuma bensusani sp.n.

(Coleoptera: Curculionidae: Cryptorhynchinae)*

by

Peter E. Stüben, Mönchengladbach

with 5 figures

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Abstract
A new species of the weevil genus *Torneuma* Wollaston 1860 is described from Gibraltar and distinguished from some other related species of the *Torneuma deplanatum* group from Italy, Corfu and North Africa; with 5 figures.
Key words. Curculionidae, Cryptorhynchinae, Torneumatini, *Torneuma,* new species, taxonomy, systematics, Gibraltar, Iberia.

Torneuma bensusani sp.n.

Type material
Holotype. **1**♂**,** „Gibraltar, Engineer Road, Upper Rock Nature Reserve, 36°07'26"N, 5°20'50"W, 160 m, under *Ficus carica*, 3.2.2010, leg. C. Perez & K. Bensusan", coll. Curculio-Institute, D-Mönchengladbach. / ***Paratype.*** **1**♂, data as for holotype, 25.7.2010, leg. Stüben, &.Torres

Further material: 3♂, **5**♀, "Spain, Ceuta (Septa), Mirador Isabel II, 35°53'33"N 5°21'47" W, 207 m, washing soil around *Asphodelus* sp., habitat of low scrub with *Cistus* & *Genista* sp., 8.5.2010, leg. Bensusan & Guillem", coll Gibraltar Ornithological & Natural History Society, Stüben (1♂ specimen used for molecular analysis).

Description (Fig. 1, 2)
Length. 2.7 mm (without rostrum).
Venter. With a ***constantly deep and wide*** pectoral canal, from the fore-margin of the prosternum to the mid-coxae, terminating between the mid-coxae in a similarly deep mesosternal receptaculum (Fig. 1); fore-margin of the prosternum low-cut, an arc of a circle; the ground between the prae-coxae slightly lifted, dropping down towards the mesosternal receptaculum. The distance between the prae-coxae is large, as is their diameter. The brink of the mesosternal receptaculum is semicircular and sharp-edged. 1st and 2nd abdominal segment of the male with a wide and flat hollow.
Head* & *Rostrum. Without eyes; rostrum brown, sleek and 2.51x as long as wide between the insertions of the antennae (lower limit of 'long-nosed species'), without a mid-carina, conspicuously broadened laterally in front of the apex (Fig. 1: rostrum).
Pronotum. Elongate, 'rhombical', 1.22x as long as wide; widest at the end of the first third of the pronotum; narrowing rectilinearly laterally towards the fore-margin (less rounded than towards base). Disc of pronotum flattened, with fine punctures, their distance from each other approximately equal to their diameter.
Elytra. Brown - russet, elongate, 1.98x as long as wide; parallel-sided ('cylindrical'), oval rounded directly in front of the apex; basis line of elytra **S**-shaped curved. The puncture stripes are clearly more slender than the slightly arched intervals. These are covered with a single row of very fine, short and hardly discernible bristles.
Aedeagus. Median lobe 1.6x as long as wide ventrally, apex rounded (upended!), with a 'complex' structure of the internal sac of the aedeagus, typical for species of the *Torneuma deplanatum* group (Fig. 2).

Discussion and differential diagnosis
The very similar habitus and lack of a biological and ecological knowledge of the endogean habits of the Torneumatini have always been a problem for taxonomists working exclusively from morphology. In the past the only decisive character was the pectoral canal, which is either present and fully developed (*Torneuma*), or only present as a shallow depression in front of the prae-coxae (*Paratyphloporus*) or totally absent (*Pseudotorneuma*). In a recent study, Torneumatini have been classified using this character as well as the structure of the internal sac of the aedeagus (Stüben, 2007). The simple classification suggested in this preliminary study bore in mind scientific practices and was an attempt to settle the taxonomic confusion that had resulted from almost 150 years of research on Torneumatini. It was clear from the outset that the supposition of a continuous evolutionary transformation process (fully developed pectoral canal reaching mid-coxae → pectoral canal only as shallow depression in front of the prae-coxae → pectoral canal absent) would only deliver a heuristic, typological classification (Stüben 2007: 95). T.V. Wollaston described the genus *Torneuma* from Madeira (type species: *Torneuma caecum* Wollaston 1860) and it seems that this higher taxon should be used only for the 4 species known from the Madeiran Archipelago. Furthermore and according to our molecular analysis, the pectoral canal of Torneumatini has been reduced twice independently: on the Canary Islands and in the Mediterranean (Stüben & Astrin 2010). At present we have to consider four genera of Torneumatini (including *Paratorneuma* Roudier, 1956 resyn., with the type species *Torneuma orbatum* Wollaston 1865, La Gomera) and await further molecular results within the next months to see whether the very species-rich Mediterranean group around the type species *Torneuma deplanatum deplanatum* (Hampe 1864) requires one more genus: namely *Typhloporus* Hampe 1864!
Even if we cannot say at present whether the new species really belongs to *Typhloporus*, we diagnose here that it is closely related to the "long-nosed species" of the *Torneuma deplanatum* group from Italy, Corfu and North Africa (cf. Stüben 2007). For the placement of the new *Torneuma* species among the known 68 Torneumatini species of the Western Palaeartic, see the current pictorial key (Stüben 2008). *Torneuma bensusani* must be placed here via the series of digits A* – B* - C* – D* – 1 – 2 – 3* - 4* - 7* - 8. The important similar characters are: Rostrum of male long: at least 2.50x as long as wide ('long-nosed species'); median lobe of aedeagus (ventrally) short, < 1.80x as long as wide; endophallus 'complex' (not with 'simple' parallel sclerites of internal

sac, but with 4 lateral 'branches' and often with two additional sclerotized 'small horns', cf. Fig. 2-5). However, the 5 subspecies of *Torneuma deplanatum* (Hampe 1864) possess a slightly longer rostrum and a very short median lobe of the aedeagus (ventral), at most as wide as long (Fig. 3-5). The median lobe of the new species from Gibraltar is clearly longer (1.6x as long as wide, Fig. 2), and the pronotum is elongate (1.22x as long as wide), 'rhombical' and laterally narrowing rectilinearly towards the fore-margin (Fig. 1). In contrast, the pronotum of the other species is shorter and more rounded laterally. For comparison with all other 12 *Torneuma* from the Iberian Peninsula see also Stüben (2007, 2009, 2010).

Ecology. *Torneuma bensusani* was found whilst sampling for endogean Coleoptera, using the soil-washing method with earth collected from around the roots of *Ficus carica* L. (15-20kg to a depth of approx. 0.4m) in a shady habitat of high maquis dominated by *Olea europaea* L., on the west-facing slope of the Rock of Gibraltar. The species was found in sympatry with *Torneuma baeticum* Stüben 2007, a seemingly more common and widespread species in Gibraltar and South Spain (locus typicus: Sierra Bermeja). The series from Ceuta was likewise collected using the soil-washing method with earth collected around an *Asphodelus* sp. that was not in flower, surrounded by low scrub of *Cistus* and *Genista* spp. (ca. 20kg to a depth of approx. 0.3m). The bulbs of the *Asphodelus* showed extensive damage, probably due to feeding by larvae of *Torneuma*.

Etymology. The author dedicates this species to his colleague Keith Bensusan (Gibraltar), who first collected this new species from both sides of the Strait of Gibraltar (Ceuta lies directly south of Gibraltar, at some 22 km).

Distribution. *Torneuma bensusani* is so far only known from Gibraltar and North Africa (Ceuta / Septa), on opposite sides of the Strait of Gibraltar.

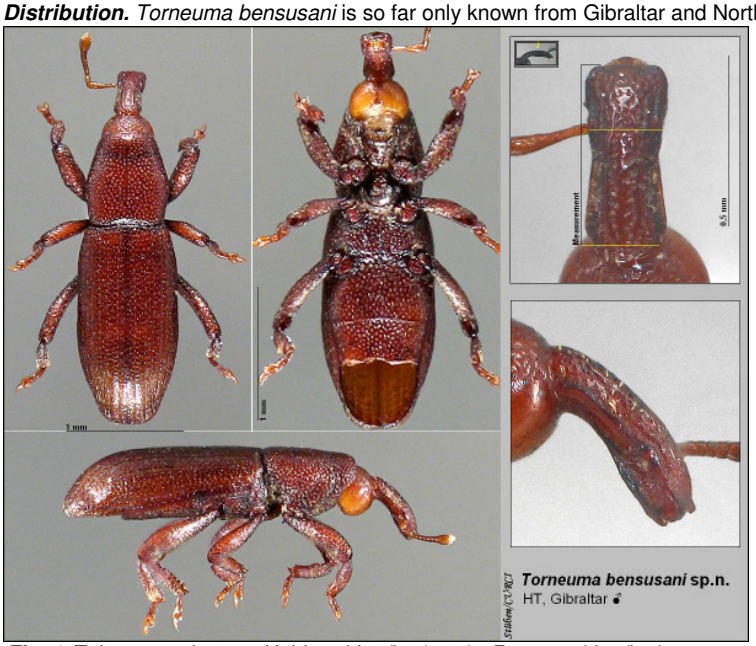

Fig. 1 *T. bensusani* sp.n. - Habitus (dor./lat./ven.) - Rostrum (dor./lat.)

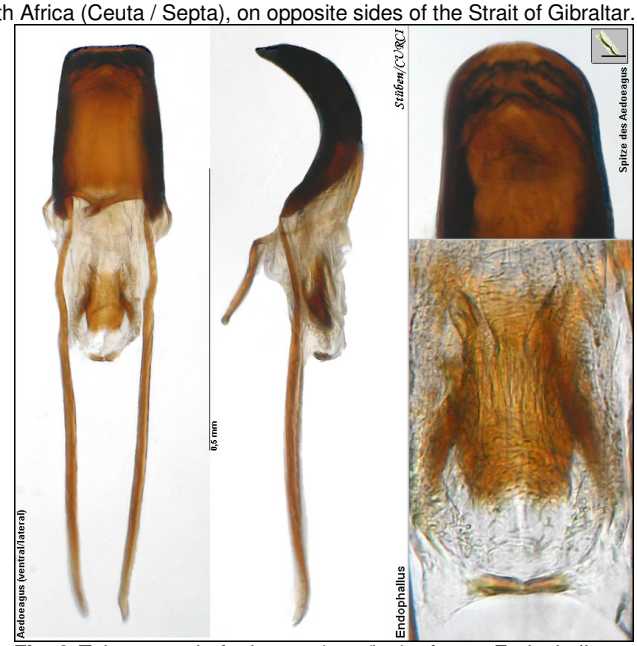

Fig. 2 *T. bensusani* - Aedeagus (ven./lat.) - Apex - Endophallus

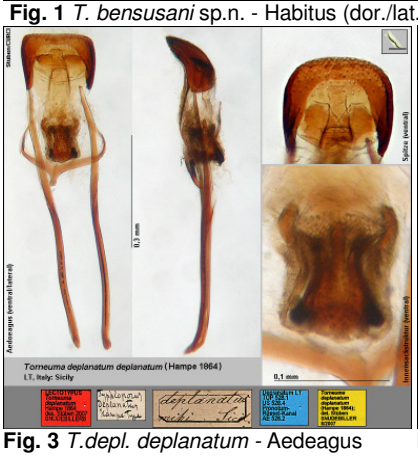

Fig. 3 *T.depl. deplanatum* - Aedeagus

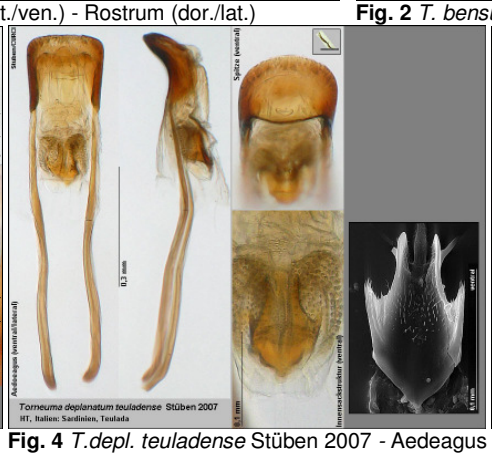

Fig. 4 *T.depl. teuladense* Stüben 2007 - Aedeagus

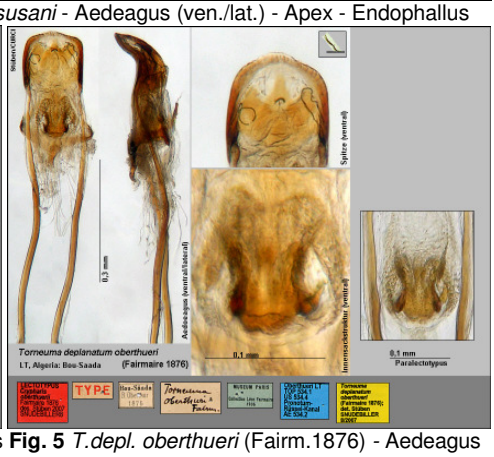

Fig. 5 *T.depl. oberthueri* (Fairm.1876) - Aedeagus

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* *Price of printable version: 6,- € + postage (CURCI, Hauweg 62, D-41066 Mönchengladbach); but we recommend to download this article and to archive it on your computer. ** Printable versions of this article of the* **Weevil *News***: *Biol. Abstr., Entomol. Abstr., Zool. Record.*

Address of the author: Dr. Peter E. Stüben, CURCULIO-Institute, Hauweg 62, 41066 Mönchengladbach, Germany, E-Mail: P.Stueben@t-online.de

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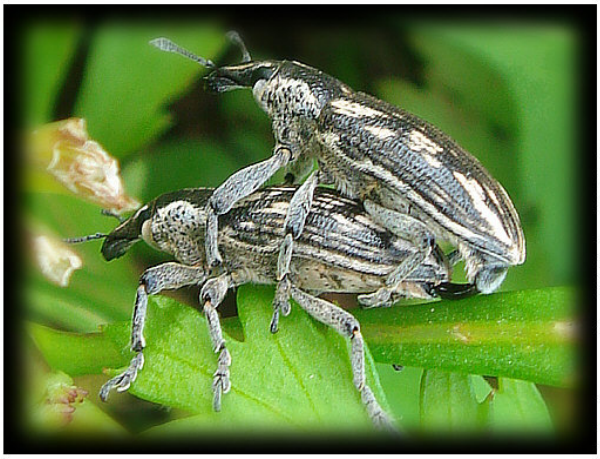


Cyphocleonus armitagei (Wollaston, 1864), La Gomera

Estación Biológica del Curculio-Institut en La Gomera

En 2010, el Peter E. Stüben dío vida a la Estación Biológica del Curculio-Institut en La Gomera, en estrecha cooperación con la **Casa Diversa** >casadiversa.com<. La estación biológica es un hotel-apartamento lindamente acondicionado y emplazado en el idílico valle de Hermigua, por debajo del ya mundialmente famoso Parque Nacional de Garajonay.

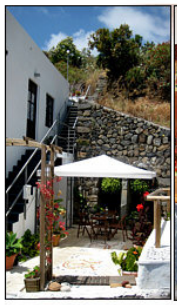
El hotel-apartamento se encuentra muy próximo al núcleo del pueblo y ofrece a nuestros miembros, así como a los colegas españoles de las islas vecinas, unas condiciones ideales no solo para descansar y recuperarse, sino especialmente como punto de partida para la investigación de la fauna canaria de gorgojos. En este sentido, ya en 2010, se inició una colección de comparación que está a disposición de los usuarios, lo mismo que los microscopios y los permisos indispensables para poder colectar en La Gomera. Además de estas ventajas, los miembros del **Curculio-Institut** cuentan con una sustaciosa reducción en los precios de hospedaje en la Estación Biológica (según la duración de la estadía, hasta un 20%) – que también se aplica a las tarifas de alquiler del vehículo de la Estación. Para estos asuntos, póngase por favor en contacto con nuestro colaborador local: Raquel & Norbert Bewernitz le ayudarán en cualquier trámite y le atenderán siempre con el mayor cariño: raquelnorbert@hotmail.com

El **Curculio-Institut** es una organización de interés social orientada a promover el intercambio científico y el trabajo conjunto con las instituciones científicas locales y las autoridades responsables de la conservación de la naturaleza. No solo otorgamos el máximo valor a una estrecha cooperación con estas instituciones (sobre todo de La Gomera y Tenerife), sino que empeñamos nuestro honor en el compromiso ejemplar de todos los miembros del Curculio Institut con la conservación de la singular fauna y flora de La Gomera

Ello incumbe, lógicamente, al cumplimiento de todas las regulaciones establecidas por las autoridades ambientales en La Gomera. Partimos de que al descubrirse nuevas especies, los holotipos serán depositados en el Museo de Ciencias Naturales, en Santa Cruz de Tenerife. Además de estas obviedades, esperamos que nuestros miembros hagan „una buena obra" durante su estancia, trátese de dar una charla en la Casa Diversa con asistencia de público de Hermigua, o de hacer una pequeña excursión con los huéspedes interesados, o bien depositar ejemplares adicionales o duplicados en la Colección comparativa. Si hay conocedores de la flora, por ejemplo, pueden organizar una visita guiada por los 800 m de sendero botánico privado en el Barranco Diversa, aunque, por descontado, usted puede idear su propia „buena obra". Se trata, simplemente, de que llegado el momento de su regreso, quede en la isla y sus gentes un buen recuerdo del **Curculio Institut**.

En este sentido, la Presidencia del **Curculio Institut** les desea una estadía placentera en la Casa Diversa. Contribuya a propagar nuestras ideas sobre una investigación entomológica sin fronteras y a colaborar en la conservación de la fauna y flora autóctonas de La Gomera, para que así las generaciones que nos sucedan puedan disfrutar de una experiencia excepcional en la naturaleza

Presidente del Curculio-Instituts
22 Mayo 2010



Biologische Forschungsstation
des CURCULIO-INSTITUTS „La Gomera"
Casa Diversa
Norbert Bewernitz
38820 Hermigua
Las Nuevitas
La Gomera / Canary Islands
Tel.: 0034-922-880911