Prostomis mandibularis F. (Coleoptera: Prostomidae), *Pandivirilia melaleuca* (Loew) (Diptera: Therevidae) and other saproxylic insects in Cantabria (Insecta: Coleoptera, Diptera and Hemiptera)

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Abstract: New sites are reported of saproxylic Coleoptera, Diptera and Hemiptera collected in traditional wood pasture situations in two areas of Cantabria during 2005. The most important finds are *Prostomis mandibularis* F., a beetle previously only known in Spain from Catalonia and the Basque country, and the second Spanish specimen of *Pandivirilia melaleuca* (Loew) (Diptera: Therevidae).
Key words: Saproxylic, Coleoptera, Diptera, Hemiptera, *Prostomis*, *Pandivirilia*, new sites.

***Prostomis mandibularis* F. (Coleoptera: Prostomidae) y otros insectos saproxilicos en Cantabria (Insecta: Coleoptera, Diptera and Hemiptera.)**
Resumen: Se presentan nuevas localidades de Coleoptera, Diptera y Hemiptera saproxílicos, recogidos en formaciones adehesadas tradicionales en dos áreas de Cantabria durante 2005. Los hallazgos más importantes son *Prostomis mandibularis* F., un escarabajo previamente conocido en España sólo de Cataluña y el País Vasco, y el segundo espécimen para España de *Pandivirilia melaleuca* (Loew) (Diptera: Therevidae).
Palabras clave: Saproxilicos, Coleoptera, Diptera, Hemiptera, *Prostomis*, *Pandivirilia*, nuevas localidades.

Introduction

The Cordillera Cantabrica has one of the greatest expanses of old wood pasture in western Europe and is of major importance for saproxylic insects (Alexander, 2005). The most important tree species are oak *Quercus* and beech *Fagus*, and many notably large old examples are regularly to be seen in the region. The area is also of great significance as the southern edge of the European Temperate forest saproxylic fauna. Further exploration has provided more evidence of the area's importance for saproxylic insects.

The author's first exploration of the area resulted in the discovery of two saproxylic Diptera previously unknown in Spain: *Pocota personata* (Harris) (Syrphidae) and *Pandivirilia melaleuca* (Loew) (Therevidae) (Alexander, 2008). The author's second visit (2005), reported here, found another locality for *P. melaleuca* and an important new locality for the endangered beetle *Prostomis mandibularis* Fabricius, 1801 (Prostomidae).

Alto Asón Region

Slopes above Cañedo, Valle de Soba, but below S-571 road, outside of the Parque Natural, 3° 35' 00''W, 43° 10' 30'' N: wood pasture with a thin scatter of old oaks over a large area, total number of old oak trees in excess of 1000; girths in range 3 - 4m; single specimen of *Prostomis mandibularis* within delaminating annual rings of red-rotten heartwood of old fallen oak trunk, the red-rot very soft and moist from rainwater; 675m altitude; another collapsed old oak with *Silvanus unidentatus* (Olivier, 1790) (Coleoptera: Silvanidae), *Uleiota planata* (L., 1761) and *Corticeus unicolor* Piller & Mitterpacher, 1783 (Tenebrionidae) beneath loose bark, 4th May.

Sierra del Hornijo 3° 33' 15''W, 43° 15' 04'' N: old beech forest; *Dictenidia bimaculata* (L., 1761) (Diptera: Tipulidae) reared from larvae found in large old decaying beech stump; *Platyrhinus resinosus* (Scopoli, 1763) (Coleoptera: Anthribidae) under loose bark of fallen beech with the fungus *Ustulina deusta*; also larvae of *Stenagostus rhombeus* (Olivier, 1790) (Elateridae), 5th May.

Lower south-facing slopes of Los Castros de Horneo in the Parque Natural de los Collados de Asón 3° 37' 10''W, 43° 12' 30'' N: large extent of old wood pasture at 950-1000m altitude, comprising up to 1000 old beech trees; two *Morinus asper* (Sulzer, 1776) (Coleoptera, Cerambycidae) noted at rest on old decaying beech hulk of 4.05m girth; *Rhagium mordax* (De Geer, 1775) (Cerambycidae) and *Trypodendron domesticum* (L., 1758) (Coleoptera: Scolytidae) on fallen branch, 3rd May.

Valley of Hojón and Hondojón, PN de los Collados de Asón, 3° 37' 10''W, 43° 11' 25'' N: wood pasture with old beeches of girth 3 – 4m; *Thymalus limbatus* (F., 1787) (Coleoptera: Trogosittidae) beneath bark on standing dead beech tree, 1100m altitude; *Aegomorphus clavipes* (Schrank, 1781) (Cerambycidae) – *A. varius* (F., 1787) in Vives (2001) - reared from pupa found beneath bark on collapsed top of a 2.96m girth (at breast height) beech, together with *Bitoma crenata* (F., 1775) (Colydiidae) and *Xylocoris cursitans* (Fallèn, 1807) (Hemiptera: Anthocoridae); *Sinodendron cylindricum* (L., 1758) (Coleoptera: Lucanidae) in white-rotten beech heartwood, 6th May.

Rio Saja area, SW of Cabezón de la Sal

Tributary valley of Rio Saja, west of Ruente 4° 19'W, 43° 16' N: large expanse of oak wood pasture with scattered ancient oak and beech amongst denser oak forest. Oaks mostly about 3m girth but older trees include the famous ancient oaks Cubilon, Mellizo and Belen, achieving girths of 9 – 10m. Beeches of similar size in area. *Ctenophora flaveolata* (F., 1794) (Diptera: Tipulidae) at rest on beech trunk. *Xylophagus ater* Meigen, 1804 (Xylophagidae) larva and *Dryocoetinus villosus* (F.) (Coleoptera: Scolytidae) in fallen oak branch, 11th May.

Bayones valley, Parque Natural Saja Besaya 4° 12' 20''W, 43° 13' 50'' N: over 100 old oak and beech pollards in well-wooded valley. *Morimus asper* on butt of large dead beech pollard. Large old oak 2.95m girth, with red-rotten heartwood on ridge summit above valley of Arroyo de Canalejas: *Pseudocistela ceramboides* (L., 1758) (Coleoptera: Tenebrionidae) and *Pandivirilia melaleuca* reared from larvae found in red-rotten debris. May 13th.

Collado de Moscaorio 4° 20' 10''W, 43° 12' 15'' N: wood pasture of old oaks, girths mostly 2 – 4m, largest found 5.61m. *Xylophagus ater* larva beneath bark on fallen oak branch with *Uleiota planata* and *Paromalus flavicornis* (Herbst, 1792) (Coleoptera: Histeridae). *Mycetophagus piceus* (F., 1777) (Coleoptera Mycetophagidae) in red-rotten heartwood of standing live oak of 2.2m girth.

Discussion of the two key species

Prostomis mandibularis lives mainly in moist red-rotten heartwood of old trees, being found in the narrow spaces between the decayed annual rings, especially in oak *Quercus* but the tree species is not important. It has very occasionally been found in white-rotted heartwood (Horion, 1960). It is confined to areas of old growth, *i.e.* relatively undisturbed stands of old trees, and traditional wood pasture land management systems favour the species. It is believed to have become extinct over much of its European range as a result of felling of the old trees in which it lives and harvesting younger trees before they become suitable.

Español (1963) knew of only one record from the whole of Spain, from Catalonia, and comments that it is known from the French Pyrenees and Portugal. Carlos Otero (pers. comm.) comments that the only records known to him are from the Barcelona area: Sierra of Caurel (Lugo), Sierra of Cazorla (Jaén) and on the south slope of the Pyrenees. More recently it has been reported

from Aralar Natural Park, Basque Country (Iñaki Recalde, pers. comm.). These records are all from the decaying heartwood of sweet chestnut *Castanea sativa*, where red-rot decay is caused by the same fungus as in oak, *Laetiporus sulphureus*.

Pandivirilia melaleuca was originally discovered in the area of La Liébana in western Cantabria. The discovery of another in the Parque Natural Saja Besaya suggests that this species may be widespread in old hollow trees across the wood pastures of the Cordillera Cantabrica. The author has regularly found Therevidae larvae amongst wood mould in the hollow trees and the two specimens successfully reared have both proved to be *P. melaleuca*.

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First records of the family Anthomyzidae from peninsular Portugal

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Almeida and Andrade collected some specimens of *Anthomyza collini* Andersson 1976 by sweeping at the base of *Arundo donax* L. in Apúlia Beach - Esposende - Braga - Portugal at 41°28'20.18"N , 8°46'26.22"W on 22.VIII.2009 (Almeida and Andrade leg.) The specimens were stored in ethanol 70%. This is the first record for peninsular Portugal of the genus *Anthomyza* Fallén, 1810 and also of the family Anthomyzidae. Andrade has found two specimens of *Anthomyza collini* Andersson 1976 by sweeping through *Arundo donax* L. on 14.IX.2009 in Gulpilhares - Vila Nova de Gaia – Portugal at 41° 4'28.04"N; 8°39'23.52"W. The genus *Paranthomyza* Czerny, 1902 was found for the first time in Portugal in Parque Biológico de Gaia - Avintes - Vila Nova de Gaia at 41° 5'59.17"N, 8°33'34.70"W. The specimen was found hovering over *Tradescantia fluminensis* Vell. and turned out to be conspecific with *Paranthomyza nitida* Meigen, 1838. Andrade collected five specimens that he stored in ethanol 70%. The authors will continue the survey for Anthomyzidae in peninsular Portugal as the Portuguese Diptera fauna is very poorly known.