

New distributional data for *Uleiota planata* (Coleoptera, Cucujoidae, Silvanidae) in Sardinia

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Abstract. The paper summarize localities and ecological note of Cucujoidae Silvanidae *Uleiota planata* (Linnaeus, 1761) in Sardinia. 10 localities belonging to 5 different provinces were described as well as 7 trees species as habitats.

Keywords: Silvanidae, *Uleiota planata*, Sardinia, Italy.

INTRODUCTION

Family Silvanidae (Coleoptera Cucujoidae *s. str.*) have a cosmopolitan distribution and have around the world at least fifty genera and close to 500 species (Thomas, 2005). Most of the taxa have under bark, phytophilous or detritus habitats, with few infesting foodstuff (Ratti & Nardi, 2011).

Silvanidae were considered for long time as part of Cucujidae family *sensu latu* (cfr. Lawrence & Newton, 1995) so is still under discussion the taxonomy over the genus level with different interpretation according to the different authors. Sen Gupta & Pal (1996) identify 4 different subfamily (Cryptamorphinae, Psammoecinae, Silvaninae e Uleiotinae) meanwhile others (Thomas, 1993; Lawrence & Newton, 1995; Lawrence et al., 1999) comply in distinguish only the 2 subfamilies (or tribes): Brontinae (= Uleiotinae) and Silvaninae. The first was part of the Cucujidae family and only recently assigned to Silvanidae by Crowson (1973) and should be represented by 3 o 4 over genus taxa, not uniquely considered. Silvaninae still have no more subdivisions (cfr. Ratti, 2007).

Here we consider the genus *Uleiota* in the family Silvanidae, subfamily Brontinae (= Uleiotinae).

Genus *Uleiota* Latreille, 1796 (= *Brontes* Fabricius, 1801; = *Hylota* Reitter, 1879; = *Hyleota* Seidlitz, 1888) have a holarctic distribution and include actually 6 species (Thomas, 2003) of which *U. planata* is native in Europe and *Uleiota dubia* (Fabricius, 1801), only once find, have to be considered as an alien in the continent (O'Connor & Nash, 1981; cfr. Ratti, 2007). *Uleiota planata* (Linnaeus, 1761) (Figure 1) is the only European species but with Palearctic chorotype (Horion, 1960), or as better specified by Ratti (1997), a probably W-Palearctic distributed as it is known surely just until Russia, Caucasus and Iran.

In Italy is known for all the regions, Sicily and Sardinia included. But the data for Sardinia, instead of what is verified for the rest of the country, were in the past just indicated with a very general “Sardinia” in the published papers (Bargagli, 1872; Luigioni, 1929; Slipinski, 2005; Ratti, 2007).

Aim of this contribution is to list locality where the species were collected and help in clarify the distribution among the Cucujoidea Silvanidae beetles.

MATERIALS AND METHODS

Information about *Uleiota planata* distribution in Sardinia were collected by direct observation in the field and checking collections regarding beetle of the island. All the specimens were controlled and identified by the authors.

RESULTS

In Table 1 are summarized the data for 35 specimens of *U. planata* collected in 10 localities belonging to 5 different provinces, all around the island (Figure 2). The species was found all around the year with a prevalence of cases in April and July. The site of collection are between 127 and 989 m in elevation. The more common tree where *U. planata* was found is the group of species in genus *Salix*, with 36% of the cases, followed by a 18% of *Quercus gr. pubescens*.

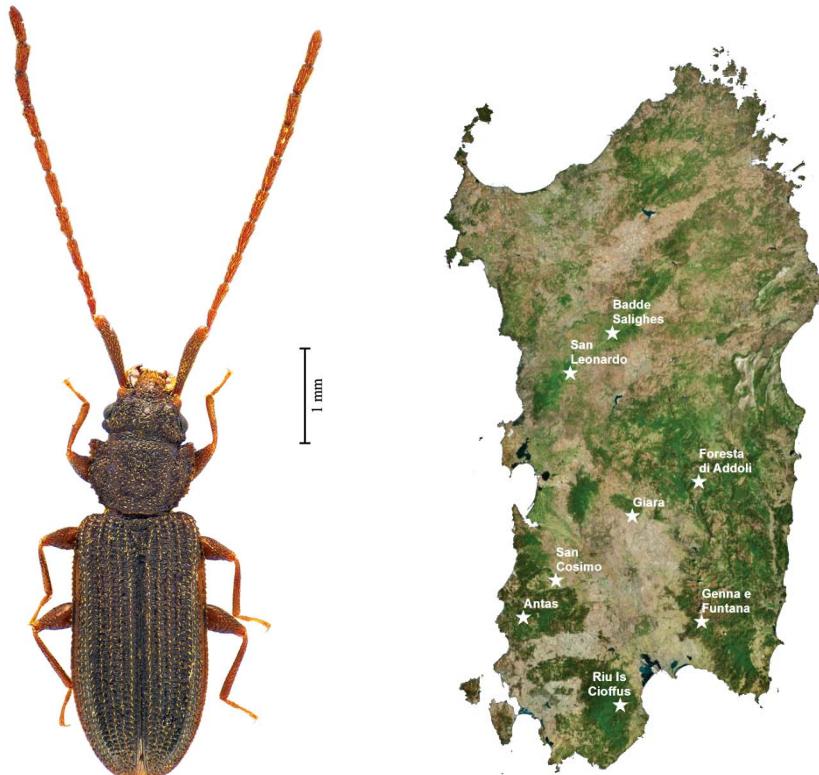


Fig. 1 – *Uleiota planata* (Linnaeus, 1761). Photo by E. Bazzato.

Fig. 2 – Map of Sardinia with the localities of *U. planata*.

Tab. 1 – Faunistical records of *Uleia planata* in Sardinia.

Municipality	Locality	Elevation (m)	Coordinates	Date	Legit	Number specimens, collection and ecological notes
Cagliari province						
Sinnai	Genna e Funtana	900	39°22'32.94"N 9°16'32.75"E	7.VIII.2011	D. Cillo	1 ex. on <i>Castanea sativa</i> (coll. Cillo, Cagliari)
Sarroch	Riu Is Cioffus	220	39°5'42.04"N 8°55'19.06"E	17.XI.2013	D. Cillo	2 specimens on <i>Celtis australis</i> (coll. Cillo, Cagliari)
Tulli	Giara	576	39°43'58.46"N 8°58'26.20"E	1.XII.2013	D. Cillo	1 specimen on <i>Quercus gr. pubescens</i> (coll. Cillo, Cagliari)
Sadali	Foresta di Addoli	745	39°50'51.84"N 9°15'57.96"E	7.IV.2010	Matějček & Cillo	5 specimens on <i>Quercus ilex</i> (coll. Jan Matějček, Hradec Králové, Czech republic; coll. Cillo, Cagliari)
Carbonia - Iglesias province						
Fluminimaggiore	Antas	318	39°23'24.46"N 8°29'40.09"E	30.IV.2012	Cillo	6 specimens on <i>Salix</i> sp. & <i>Populus nigra</i> (coll. Cillo, Cagliari)
Fluminimaggiore	Antas	326	39°23'23.19"N 8°29'54.63"E	VII.2014	Cillo	1 specimen on <i>Salix</i> sp. (coll. Lecis, Cagliari)
Medio Campidano province						
Gonnosfanadiga	San Cosimo	127	39°30'55.12"N 8°38'21.73"E	10.III.2012	Alamanni	15 specimens on <i>Salix</i> sp. (coll. Cillo, Cagliari; coll. Alamanni, Cagliari)
Gonnosfanadiga	San Cosimo	128	39°30'50.58"N 8°38'12.72"E	11.I.2015	Alamanni	1 specimen on <i>Salix</i> sp. (coll. Cillo, Cagliari; coll. Alamanni, Cagliari)
Oristano province						
Santu Lussurgiu	San Leonardo	649	40°12'51.31"N 8°42'0.15"E	VII.2013	Cillo	1 specimen on <i>Quercus gr. pubescens</i> (coll. Cillo, Cagliari)
Nuoro province						
Bolotana	Badde Salighes	989	40°20'59.24"N 8°53'7.72"E	6.IV.2010	Cillo & Sechi	2 specimens under the bank of <i>Taxus baccata</i> (coll. Cillo, Cagliari; coll. Sechi, Cagliari)

scens and in the same number of case by *Populus nigra*, *Celtis australis*, *Quercus ilex*, *Castanea sativa* and *Taxus baccata*.

DISCUSSION

Uleiota planata is a saproxylic beetle living mostly under bark and in Europe was collected on a large number of broadleaves trees as *Alnus* sp., *Betula* sp., *Castanea* sp., *Celtis* sp., *Cerasus* sp., *Fagus* sp., *Hippocastanus* sp., *Populus* sp., *Quercus* sp., *Robinia* sp., *Salix* sp., *Ulmus* sp., but also on conifers as *Abies* sp., *Cedrus* sp., *Pinus* sp. (Wheeler, 1921; Allen, 1953; Horion, 1960; Verdo Court, 1994; Ratti, 2007).

As quoted for Italy *U. planata* do not seems to have a predominant habitat and was found in hygrophilous and mesophilous woods as well as in xeric pinewood along coasts or in Apennine spruce formations (cfr. Ratti, 2007).

In Sardinia also was found on a variety of species, as quoted in the results, according to European literature (Wheeler, 1921; Allen, 1953; Horion, 1960; Verdo Court, 1994; Ratti, 2007). All the localities here cited for Sardinia, with the exception of Is Cioffus in the municipality of Sarroch (Figure 3) that is a xeric environment, are characterized by wet woods, reach in saproxilic community (Figure 4). Anyway this community, so reach of bioindicator and rare species (cfr. Alexander, 2010; Lachata et al., 2012; Audisio et al., 2015) is still poorly known for Sardinia. Recently, thanks to a new research effort in the field, unexpectedly there were a series of new sighting or rediscovering of taxon after decades in the island of saproxilic entities from different taxonomic groups as *Pyrrhidium sanguineum* Linnaeus, 1758 (Bazzato & Cillo, 2011) and *Xylotrechus (Xylotrechus) antilope antilope* (Schönherr, 1817) (Bazzato & Cillo, 2012) (Coleoptera, Cerambycidae); *Accanthopuss velikensis* (Piller & Mitterpacher, 1783) (Bazzato et al., 2012) and *Helops caeruleus* (Linnaeus, 1758) (Molinu & Molinu, 1998) (Coleoptera, Tenebrionidae); *Agrilus ater* (Linnaeus, 1767) (Bazzato et al., 2015) and *Phaenops cyanea* (Fabricius, 1775) (Cillo & Bazzato, 2014) (Coleoptera, Buprestidae).



Fig. 3 – Is Cioffus gorge, Sarroch municipality. Photo by D. Cillo.

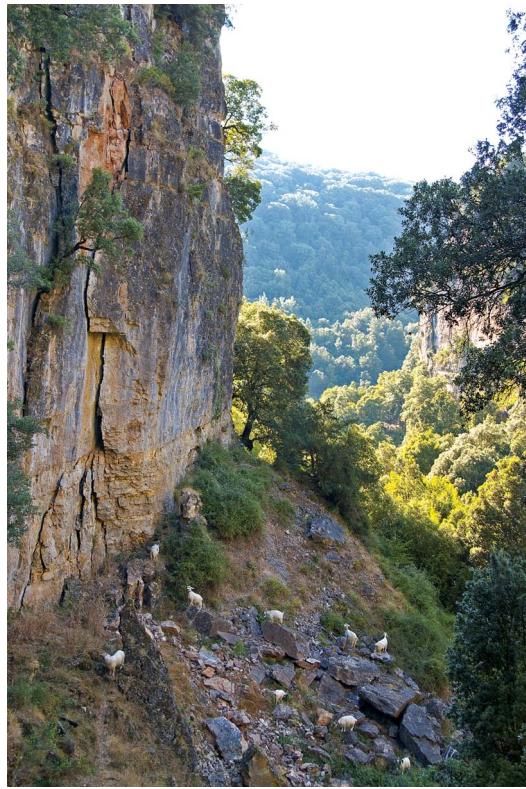


Fig. 4 – Addoli forest in Sadali gorge. Photo by E. Bazzato.

Also the large movement of timber for the market from abroad can provide a passive transportation of some of these taxa and a more detailed description of Sardinia beetle community have to be priority for a better knowledge and relative protection.

RIASSUNTO

Nuovi dati geonemici per la Sardegna su *Uleiota planata* (Coleoptera, Cucujoidae, Silvanidae)

Vengono rese note le località di cattura per la Sardegna del Cucujoidae Silvanidae *Uleiota planata* (Linnaeus, 1761), specie citata genericamente di Sardegna senza mai precisarne le località. Vengono descritte 10 località in 5 province e 7 specie di alberi habitat.

REFERENCES

- Alexander K.N.A. (2010). Tree biology and saproxylic Coleoptera: issues of definitions and conservation language. *Revue d'Ecologie (Terre Vie)*, 63 (2008): 1-5.
- Allen A.A. (1953). Two remarkable rediscoveries in the British Coleoptera. *Ent. Mon. Mag.*, 89: 148-149.
- Audisio P., Baviera C., Carpaneto G.M., Biscaccianti A.B., Battistoni A., Teofili C., Rondinini C. (comp.) (2014). *Lista Rossa IUCN dei Coleotteri saproxilici Italiani*. Comitato Italiano IUCN e Ministero dell'Ambiente e della Tutela del Territorio e del Mare, Roma, 134 pp.

- Bazzato E. & Cillo D. (2011). Segnalazioni Faunistiche italiane: 515 - *Pyrrhidium sanguineum* Linnaeus, 1758 (Coleoptera Cerambycidae). Conferma per la Sardegna di specie turanico-euro-mediterranea, già segnalata di un'altra località dell'isola. *Boll. Soc. entomol. ital.*, 143 (1): 40-44.
- Bazzato E. & Cillo D. (2012). Segnalazioni Faunistiche italiane: 535 - *Xylotrechus (Xylotrechus) antilope antilope* (Schönherr, 1817) (Coleoptera Cerambycidae). Prima segnalazione per la Sardegna di specie Europea Mediterranea, già nota di altre regioni d'Italia. *Boll. Soc. entomol. ital.*, 144 (1): 46.
- Bazzato E., Cillo D., Atzori M.G. (2015). Segnalazioni Faunistiche italiane: 586 - *Agrius (Uragrillus) ater* (Linnaeus, 1767) (Coleoptera Buprestidae). Prima segnalazione per la Sardegna di specie a corotipo Turanico-Europeo, conosciuta di altre regioni d'Italia. *Boll. Soc. entomol. ital.*, 147 (1): 43-47.
- Bazzato E., Sanna F., Cillo D. (2012). *Accanthopus velikensis* (Piller & Mitterpacher, 1783) (Coleoptera, Tenebrionidae). Prima segnalazione per la Sardegna di specie S-Europea, conosciuta di altre regioni italiane. *Bollettino dell'Associazione Romana di Entomologia*, 67 (1-4): 87-90.
- Cillo D., Bazzato E. (2014). Segnalazioni Faunistiche italiane: 576 - *Phaenops cyanea* (Fabricius, 1775) (Coleoptera Buprestidae). Prima segnalazione per la Sardegna. *Boll. Soc. entomol. ital.*, 146 (1): I.
- Cola L. (1971). Mit fremden Hölzern eingeschleppte Insekten, insbesondere Scolytidae und Platypodidae. *Anzeiger für Schädlingskunde und Pflanzenschutz*, 44(5): 65-68.
- Crowson R.A. (1973). Further observations on Phloeostichidae and Cavognathidae, with definitions of new genera from Australia and New Zealand. *Coleopterist's Bull.*, 27: 54-62.
- Crowson R.A. & Ellis I. (1967). Observations on *Dendrophagus crenatus* (Paykull) (Cucujidae) and some comparisons with Piestine Staphylinidae (Coleoptera). *Ent. Mon. Mag.*, 104: 161-169.
- Horion H. (1960). Faunistik der mitteleuropäischen Käfer, VII. Clavicornia 1. Teil (Sphaeritidae bis Phalacridae). *Schmidt*, Überlingen-Bodensee, 346 pp.
- Lachata T., B. Wermelinga, M.M. Gossnerb, H. Busslerc, G. Isacssond, J. Müllerb, (2012). Saproxylic beetles as indicator species for dead-wood amount and temperature in European beech forests. *Ecological Indicators* 23: 323-331.
- Lawrence J.F. & Newton A.F. JR. (1995). Families and subfamilies of Coleoptera (with selected genera, notes, references and data on family-group names). pp. 779-1006. In: Pakaluk J. & Slipinski S.A. (eds.). *Biology, Phylogeny, and Classification of Coleoptera: Papers Celebrating the 80th Birthday of Roy A. Crowson*. Mus. Inst. Zool. PAN, Warszawa.
- Lawrence J.F., Hastings A.M., Dallwitz M.J., Paine T.A. & Zurcher E.J. (1999). Beetles of the world. A Key and Information System for Families and Subfamilies. Version 1.0. *CSIRO Entomology*, Canberra, Australia, 1999.
- Molinu A. & Molinu A.V. (1998). Segnalazioni faunistiche italiane: 327 - *Helops coeruleus* (Linné, 1758) (Coleoptera, Tenebrionidae). Prima segnalazione per la Sardegna. *Boll. Soc. entomol. ital.*, 130(1): 179.
- O'Connor J.P. & Nash R. (1981). Notes on five species of insects (Hemiptera: Coleoptera) imported into Ireland. *Irish Nat. J.*, 20(7): 299-300.
- Ratti E. (2007). I Coleotteri Silvanidi in Italia (Coleoptera Cucujoidea Silvanidae). *Bollettino del Museo civico di Storia naturale di Venezia*, 58: 83-137.
- Ratti E. & Nardi G. (2011). Silvanidae, Cucujidae e Laemophloeidae di Sardegna: catalogo provvisorio (Coleoptera: Cucujoidea). In: Nardi G., Whitmore D., Bardiani M., Birtele D., Mason F., Spada L. & Cerretti P. (eds.). *Biodiversity of Marganai and Montimannu (Sardinia). Research in the framework of the ICP Forests network. Conservazione Habitat Invertebrati*, 5: 461-492.
- Sen Gupta T. & Pal T.K. (1996). Clavicornia: Coleoptera Family Silvanidae. *Fauna of India*, 262 pp.
- Thomas M.C. (1993). The Flat Bark Beetles of Florida (Coleoptera: Silvanidae, Passandridae, Laemophloeidae). *Arthropods of Florida and Neighboring Land Areas*, 15: VII+93 pp.
- Thomas M.C. (2003). The Brontini of the world: A generic review of the tribe (Coleoptera: Silvanidae: Brontini). *Insecta Mundi*, 17(1-2): 1-28.
- Thomas M.C. (2005). A preliminary checklist of the Flat bark beetles of the world (Family Silvanidae). Available from: <http://www.fsca-dpi.org/Coleoptera/Mike/chklist5.htm> (accessed 16 October 2015).
- Verdocourt B. (1994). *Uleiota planata* (L.) (Col., Cucujidae), *Enicmus rugosus* (Hbst.) (Col., Lathridiidae) and other insects under beech bark in Beshire. *Ent. Mon. Mag.*, 130 (1556-1559): 65-66.
- Wheeler W.M. (1921). Notes on the habits of European and North American Cucujidae (sens. auct.). *Zoologica - N. York Zool. Soc.*, 3(5): 173-183.