

CONSIDERATIONS ON THE DYNASTIDAE FAMILY (INSECTA: COLEOPTERA: SCARABAEOIDEA), FROM THE FAUNA OF OLTENIA, ROMANIA

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Abstract. *This paper introduces in the scientific informational circuit new data regarding the presence of the Dynastidae in the fauna of Oltenia. We analyzed 111 specimens collected during the years 1995–2009 by the specialists of the Natural Science Section from 22 sites mostly from Dolj County. We identified the two species known in Romania *Pentodon idiota idiota* (HERBST 1789) and *Oryctes (Oryctes) nasicornis* (LINNAEUS 1758), the last one being a saproxylic species, a bioindicator of the forests of European importance.*

Keywords: *considerations, Dynastidae family, Oltenia's fauna, Romania.*

Rezumat. Considerații asupra familiei Dynastidae (Insecta: Coleoptera: Scarabaeoidea) din fauna Olteniei, România. *Lucrarea introduce în circuitul științific informațional, noi date privind prezența dinastidelor în fauna Olteniei. Sunt analizate 111 exemplare colectate în perioada anilor 1995–2009 de către specialiștii Secției de Științele Naturii, din Oltenia, din 22 de situri, majoritatea din județul Dolj. Au fost identificate cele două specii cunoscute din România *Pentodon idiota idiota* (HERBST 1789) și *Oryctes (Oryctes) nasicornis* (LINNAEUS 1758), ultima fiind specie saproxilică, bioindicator al pădurilor de importanță europeană.*

Cuvinte cheie: *considerații, familia Dynastidae, fauna Olteniei, România.*

INTRODUCTION

The Dynastinae Family KOLBE 1897 is represented in Romanian fauna by 4 species and subspecies included in two genera and two tribes. Data regarding the geographical distribution, the morphology, the economic importance, and the presence of this group of coleopterans in the fauna of Oltenia are found in the synthesis paper published by CHIMIȘLIU (2005). In this paper, the author has scientifically processed data of 359 specimens collected during the years 1951 – 2003 by the specialists of the Natural Science Section from 47 sites from the five counties of Oltenia. The author had also centralized data on the Dynastidae fauna from Oltenia since 1928. The present paper intends to introduce in the scientific informational circuit new data regarding the presence of the Dynastidae in Oltenia's fauna.

MATERIAL AND METHODS

The analyzed material is represented by 111 specimens preserved in the entomological collections of the museum and collected during 1995-2009 by the specialists of the Natural Science Section, from the natural and anthropogenic ecosystems of Oltenia (Fig. 1).

In order to determine the collected material we used the papers of PANIN (1957) and MEDVEDEV (1960) as bibliographical material.

The taxonomic system and the species nomenclature are those used in Fauna Europaea.

The paper includes the list of specialists who have collected the material with the abbreviations used in text and a list of the collection sites (with the indication of the counties). For every species, there were given:

- previous reports from the Oltenia Museum patrimony (BOBÎRNAC et al., 1999a; BOBÎRNAC et al., 1999b; CHIMIȘLIU, 2000, 2005) and the patrimony of the Iron Gates Region Museum from Drobeta Turnu-Severin (CHIMIȘLIU & BOTU, 2000).

- collection data for each species are presented in the alphabetical order of the collection sites and within these, data are expressed in chronological order.

Abbreviations:

County names: DJ – Dolj; GJ – Gorj; MH – Mehedinți; OT – Olt; VL – Vâlcea.

Collectors' names (legit): B.L. - Bălă Lavinia; C.C. - Chimișliu Cornelia; F.G. - Filcu Gheorghita; N.A. - Năstase Adrian; V.A. - Vișan Aneta.

Collecting sites (Fig. 1):

- | | | |
|---------------------------|---------------------------|---------------------------|
| 1. Bratovoști (DJ) | 8. Ciineni (VL) | 16. Negoii (DJ) |
| 2. Brezoi (VL) | 9. Craiova (DJ) | 17. Ocnita (VL) |
| 3. Bucovaș (DJ) | 10. Craiova- Parc (DJ) | 18. Pădurea Sarului (OT) |
| 4. Calafat (DJ) | 11. Craiova (Teatru) (DJ) | 19. Pădurea Stârmina (MH) |
| 5. Cheile Galbenului (GJ) | 12. Dăbuleni (DJ) | 20. Răcari (DJ) |
| 6. Cheile Sohodol (GJ) | 13. Dr. Tr. Severin (MH) | 21. Secui (DJ) |
| 7. Ciocadia (GJ) | 14. Leamna (DJ) | 22. Straja (GJ) |
| | 15. Leu (DJ) | |

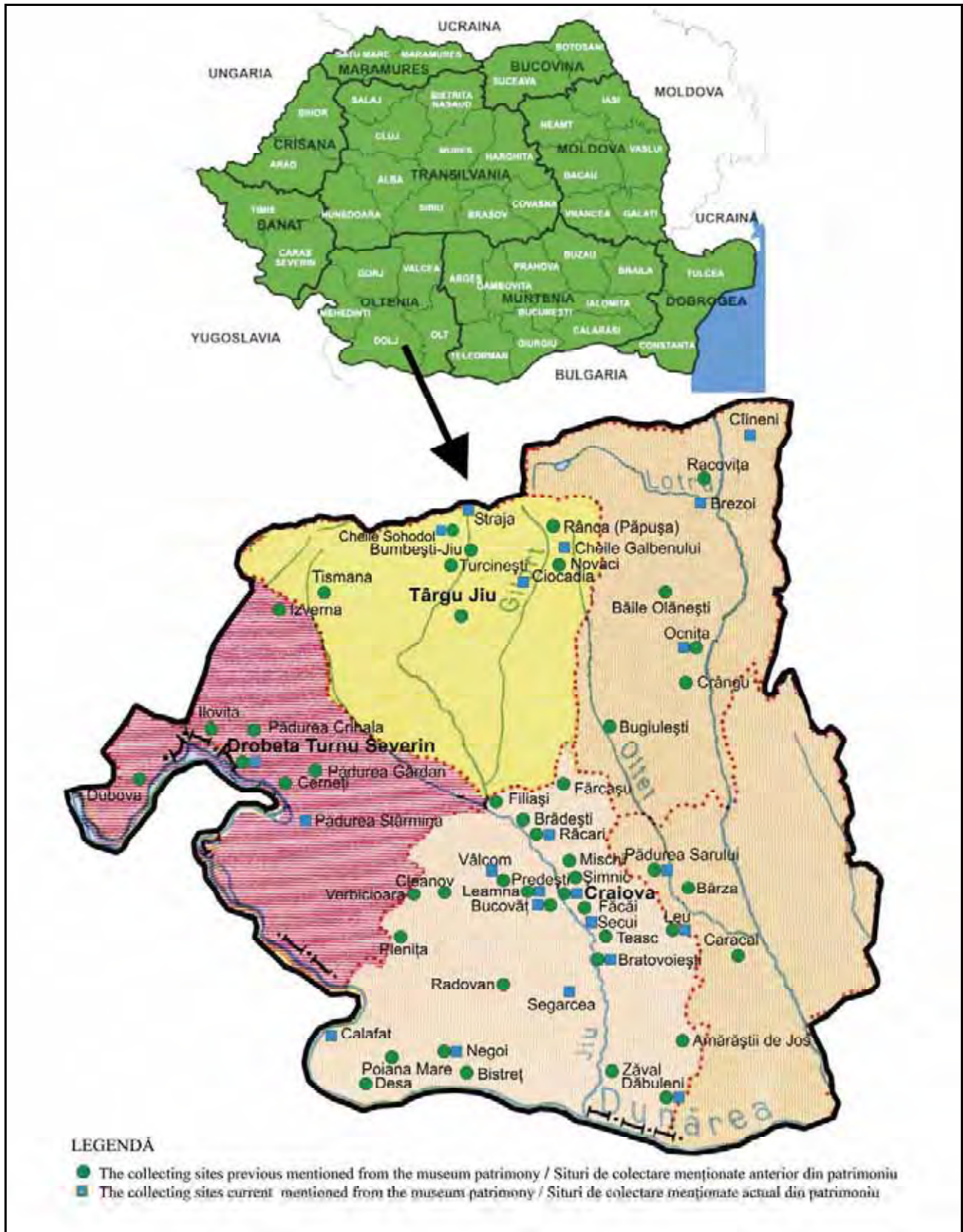


Figure 1. Romania map with Oltenia location and the collecting sites.
 Figura 1. Harta Romaniei cu localizarea Olteniei și siturile de colectare.

RESULTS AND DISCUSSIONS

As a result of processing the material, the species *Oryctes (Oryctes) nasicornis* and *Pentodon idiota idiota* were identified.

The two species were collected from 22 sites from the five counties of Oltenia. Most collections were made in Dolj County (12), followed by the counties Gorj (4), Vâlcea (3), Mehedinți (2) and Olt (1). The results obtained by analyzing the material, come to reconfirm the presence of the two species in the fauna of Oltenia. Thus, of those 22 sites, 10 are mentioned now for the first time.

We shall further present the list of the identified species:

***Oryctes (Oryctes) nasicornis* (LINNAEUS 1758)**

Previous reports from the museum patrimony: BOBÎRNAC et al. (1999b): Bugiulești; CHIMIȘLIU & BOTU (2000): Cerneți, Drobeta Turnu-Severin; CHIMIȘLIU (2000): Craiova, Plenița, Tismana, Verbicioara; CHIMIȘLIU (2005): Amărăștii de Jos, Bratovoiești, Bucovăț, Bugiulești, Bumbesti, Cerneți, Cheile Sohodol, Craiova, Craiova-Gr. Botanică, Craiova-Obedeanu, Crângu, Desa, Drobeta Turnu-Severin, Făcăi, Fărcașu, Filiași, Izverna, Ilovița, Leamna, Leu, Mischii, Ocnîța, Olănești, Rânca (Păpușa), Plenița, Predești, Pădurea Sarului, Poiana Mare, Racovița, Răcari, Șimnic, Târgu Jiu, Teasc, Turcinești, Vâlcom, Verbicioara.

Examined material: 67 specs.: Balș – July 12, 2000; Bratovoiești – 1 ♂ June 9, 2004 leg. C. C.; 1 ♀ July 25, 2004 leg. N. A.; Brezoi – 1 ♂ July 1, 1998 leg. N. A.; Bucovăț – 1 ♂ and 1 ♀ June 10, 2000 leg. C. C.; 1 ♀ May 5, 2000 leg. V. A.; 1 ♂ and 1 ♀ June 31, 2001 leg. V. A.; 1 ♂ and 1 ♀ June 19, 2001 leg. B. L.; 1 ♂ July 5, 2005 leg. B. L.; 1 ♀ May 27, 2007 leg. V. A.; Calafat - 1 ♂ June 7, 2008 leg. C. C.; Cheile Sohodol – 1 ♀ July 27, 1995 leg. C. C.; 1 ♂ August 17, 2002 leg. C. C.; Ciocadia - 1 ♂ July 5, 2008 leg. B. L.; Cîineni – 1 ♀ July 18, 2003 leg. N. A.; Craiova - 1 ♀ June 26, 2002 B. L.; ♂ June 10, 2003 leg. B. L.; 1 ♀ June 8, 2004 leg. B. L.; 1 ♂ July 6, 2005; 1 ♂ June 27, 2006; 3 specs. June 14, 2007 B. L.; 2 ♂♂ May 17, 2008 leg. B. L.; 1 ♂ June 11, 2008 leg. B. L.; 2 ♂♂ and 2 ♀♀ July 3, 2008 leg. C. C. and B. L.; 1 ♂ June 16, 2009 leg. R. M.; Craiova-Park - 1 ♂ June 24, 2003 leg. F.G.; Dăbuleni - 2 ♀♀ July 23, 2004 leg. C. C.; Gogoșu – 1 ♂ August 10, 2001 leg. N.A.; Leamna – 1 ♂ and 2 ♀♀ July 31, 2001. leg. B. L.; Leu - 1 ♂ June 15, 1999 leg. C. C.; Negoii – 3 ♀♀ July 12, 2004 leg. V. A.; 1 ♀ June 5, 2007 leg. V. A.; 2 ♂♂ and 3 ♀♀ June 21, 2008 leg. V. A.; Ocnîța – 2 ♂♂ August 17, 1999 leg. C. C.; Orșova - 1 ♀ June 20, 2007; Pădurea Sarului – 2 ♂♂ July 14, 2000 leg. C. C.; 1 ♂ July 25, 2001 leg. N.A.; Pădurea Stârmina - 1 ♂ July 23, 2001 leg. N. A.; Răcari – 1 ♂ July 17, 2001 leg. C. C.; Secui - 1 ♂ DJ May 24, 2008 leg. C. C.; 1 ♂ and 1 ♀ July 22, 2009; Straja - 1 ♂ August 3, 2000 leg. V. A.; Șimnic – 1 ♀ July 15, 2004 leg. F.G.; 1 ♂ April 1, 2007; 1 ♂ June 10, 2008; 1 ♂ and 2 ♀♀ June 6, 2008 leg. F.G.;

***Pentodon idiota idiota* (HERBST 1789)**

Previous reports from the museum patrimony: BOBÎRNAC et al. (1999a): Valea Sohodol; BOBÎRNAC et al. (1999b): Novaci; CHIMIȘLIU & BOTU (2000): Dubova, Pădurea Crihala (Breznița); CHIMIȘLIU (2000): Craiova; CHIMIȘLIU (2005): Bârza, Bistreț, Brădești, Bucovăț, Caracal, Cheile Sohodol, Cleanov, Craiova, Craiova-Botanical Garden, Dăbuleni, Desa, Drobeta Turnu-Severin, Dubova, Leamna, Leu, Negoii, Novaci, Pădurea Gârdan, Radovan, Segarcea, Șimnic, Verbicioara, Zăval.

Examined material: 44 specs.: Bucovăț – 5 specs. July 5, 1999 leg. C. C.; June 9, 1999 leg. C. C.; July 5, 2005 leg. B. L.; Cheile Galbenului – August 13, 2005 leg. C. C.; Cheile Sohodol – July 27, 1995 leg. C. C.; 2 specs. August 28, 1999 leg. C. C.; August 17, 2002 leg. C. C.; Craiova – July 7, 2001 leg. F. G.; August 3, 2002 leg. V. A.; June 2, 2005 leg. F. G.; June 25, 2005 leg. B. L.; Craiova (Theatre) August 1, 2001 leg. C. C.; Dr. Turnu-Severin – June 6, 2009 leg. C. C.; Negoii – May 18, 2002; June 5, 2004 leg. V. A.; Secui – April 14, 2008 leg. C. C.; Șimnic – June 9, 2000 leg. F.G.; 2 specs. March 23, 2000 leg. F.G.; 2 specs. May 10, 2004 leg. F.G.; May 13, 2004 leg. F.G.; June 13, 2004 leg. F.G.; June 17, 2004 leg. F.G.; June 20, 2004 leg. F.G.; 2 specs. June 23, 2004 leg. F.G.; July 7, 2004 leg. F.G.; March 29, 2005 leg. F.G.; April 22, 2005 leg. F.G.; June 2, 2005 leg. F.G.; June 15, 2005 leg. F.G.; June 19, 2005 leg. F.G.; June 20, 2005 leg. F.G.; June 5, 2006 leg. F.G.; June 1, 2007 leg. F.G.; June 10, 2007 leg. F.G.; March 20, 2008 leg. F.G.; April 12, 2008 leg. F.G.; June 15, 2008 leg. F.G.; June 12, 2008 leg. F.G.;

This paper joins the efforts of specialists who contribute to the knowledge of the entomofauna diversity, being known the fact that, though the insects have the biggest role as number of species and individuals in the animal kingdom and contribute to maintaining the biological balance of ecosystems, they are often underestimated, many groups of insects and large areas being unstudied and unknown for experts.

Of the two species of dynastids identified in the analyzed material, *Oryctes nasicornis* belongs to the category of saproxylic coleopterans, indicators of the forests of European importance (BACAL, 2006, BABAN, 2008) together with other scarabeoids (*Lucanus cervus* LINNAEUS, 1758, *Cetonischema aeruginosa* (DRURY 1770), *Gnorimus octopunctatus* (FABRICIUS 1775), *Liocola lugubris* (HERBST 1786), *Osmoderma eremita* (SCOPOLI 1763)). The knowledge of its distribution in Oltenia may constitute a database for the studies made for identifying the different types of forests of European importance.

The saproxylic species are recognized in the European legislation as being a fundamental part of the European natural heritage due to their scientific importance, educational, cultural, recreational, aesthetic and intrinsic value. In Europe, a large number of saproxylic organisms have disappeared and others have become very rare due to the deterioration or extinction of habitats. Taking into account that saproxylic species are excellent bioindicators of the forests

of European importance and many species are in decline, many experts have approached the study of ecology of the saproxylic species. Many species and their habitats are protected by EU and national legislation.

Recognizing the saproxylic insects as components of the World Natural Heritage, Council of Europe has recommended a series of measures relating to nature conservation, management of natural forests and of protected natural areas, intended to lead to the knowledge and protection of saproxylic coleopterans and of their habitats.

CONCLUSIONS

Two species *Oryctes (Oryctes) nasicornis* (LINNAEUS 1758) and *Pentodon idiota idiota* (HERBST 1789) collected from 22 sites were identified. The first one is a saproxylic species, a bioindicator of the forests of European importance.

The Natural Science Section patrimony preserves all the representatives Dynastidae family mentioned so far in the fauna of Romania, constituting an important database for the knowledge of the diversity of Oltenia's entomofauna.

The addition of those 10 new sites expands the family area within Oltenia's territory.

Thanks to the established and preserved collections, the museums of natural sciences contribute to the knowledge of species and their importance in nature, which are essential in the efforts made by specialists for nature conservation and protection of wild fauna species.

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Received: June 1, 2009
Accepted: August 5, 2009