

Stefano Ziani & Ivo Gudenzi

**ABOUT SOME *ONTHOPHAGUS* LATREILLE, 1802  
(SENSU LATO) COLLECTED DURING A TRIP TO IRAN**

(Insecta Coleoptera Scarabaeidae)

**Riassunto**

[*Su alcuni Onthophagus Latreille, 1802 (sensu lato) raccolti durante un viaggio in Iran*]  
Sono elencati gli *Onthophagus* Latreille (sensu lato) raccolti da uno degli autori (Ziani) durante un viaggio in Iran. Vengono inoltre presentati, in tredici figure, i disegni originali dell'apparato copulatore maschile, dell'habitus e di alcuni dettagli di quelle specie per le quali tali iconografie non risultano essere state pubblicate in precedenza.

**Abstract**

A list of *Onthophagus* Latreille (sensu lato) collected by one of the authors (Ziani) during a trip to Iran is given, with original drawings (in thirteen figures) of male genitalia, habitus and other details of species not figured before.

Key words: Scarabaeoidea, *Onthophagus*, *Furconthophagus*, *Palaeonthophagus*, Iran, list of species, new records.

We have listed in alphabetical order the *Onthophagus* Latreille, 1802 (sensu lato) collected by one of us (Ziani) during a trip to Iran, from 6th to 19th April 1998. Nineteen species were collected over there; they are listed following Zunino's taxonomic arrangement (ZUNINO, 1979). Furthermore, we propose drawings of the aedeagus, copulatory lamella, habitus, and details of *Onthophagus* taxa of which, as far as we know, such kinds of iconographies have never been published before. All material collected is preserved in Ziani's collection (Z. coll.)

***Onthophagus (Furconthophagus) furcatus* (Fabricius, 1781)**

BALTHASAR, 1963: 357.

Type locality: Arabia.

Distribution: Central and Southern Europe; Asia Minor, Middle East, Central Asia to Mongolia; Morocco (ZIANI, 1995).

Male genital armature: ZUNINO, 1979: 12, tav. II.

Material examined: Mazandaran prov., 50 km S Chalus.

***Onthophagus (Furconthophagus) variegatus* (Fabricius, 1798)**

BALTHASAR, 1963: 575.

Type locality: India.

Distribution: Arabia, Irak, Iran as far as India; Egypt, Central and Southern Africa (BARAUD, 1985), Senegal, Mali, Chad (BARBERO, pers. comm.).

Male genital armature: fig. 1.

Material examined: Kerman prov., Bam 1400 m; Shiraz prov., Neyriz 1500 m.

***Onthophagus (Onthophagus) illyricus* (Scopoli, 1763)**

BALTHASAR, 1963: 387.

Type locality: Carniolia (mostly in Slovenia, at present).

Distribution: Central and Southern Europe; Asia Minor, Caucasus, Iraq and Iran (ZIANI, 1995), Syria (BARAUD, 1992).

Male genital armature: fig. 2.

Material examined: Mazandaran prov., Namak Abrood 1050 m; Mazandaran prov., 50 km S Chalus.

***Onthophagus (Onthophagus) taurus* (Schreber, 1759)**

BALTHASAR, 1963: 550.

Type locality (restricted): Saxony (Germany).

Distribution: Europe; Asia Minor, Near East to Afghanistan; Northern Africa (ZIANI, 1995).

Male genital armature: ZUNINO, 1979: 11, tav. I.

Material examined: Mazandaran prov., Namak Abrood 1050 m; Mazandaran prov., 50 km S Chalus; Ghilan prov., Masouleh 1400 m; Ghilan prov., Fuman 1200 m; Ghilan prov., Astaneh 1100 m; Shiraz prov., Bakhtegan lake 1500 m.

***Onthophagus (Palaeonthophagus) aerarius* Reitter, 1892**

BALTHASAR, 1963: 264.

Type locality: El Kreider (Algeria).

Distribution: Northern Africa; Syria, Northern Arabian Peninsula to Iran (ZIANI, 1997a).

Male genital armature: ZUNINO, 1978: 115, tav. III, fig. 7.

Material examined: Kerman prov., Bardsir 1600 m; Kerman prov., Jiroft 1400 m; Shiraz prov., Izadkhast 1500 m.

Remarks: *O. aerarius* has always been collected in sheep dung, a further confirmation that its habits are not exclusively associated with rodents' dens.

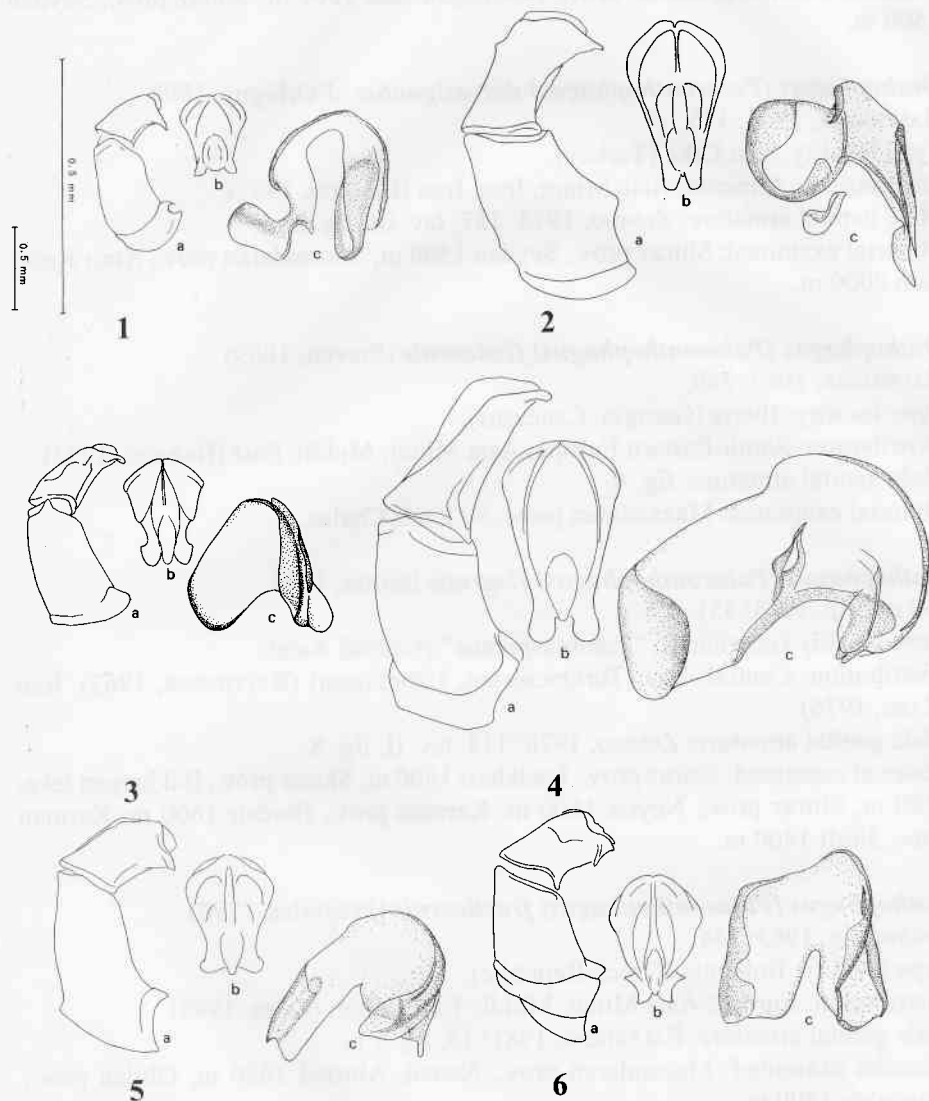
***Onthophagus (Palaeonthophagus) aleppensis* Redtenbacher, 1843**

BALTHASAR, 1963: 268.

Type locality: Syria.

Distribution: Asia Minor, Syria, Lebanon, Palestine, Jordan, Iraq, Iran, Cyprus (ZIANI, 1997b).

Male genital armature: fig. 3.



Figs. 1-6 – Male genitalia of *Onthophagus* sp.: a: aedeagus (lateral view); b: parameres (dorsal view); c: copulatory lamella of internal sac (ventral side). Scale: 0,5 mm. Lower magnification: parts a and b; higher magnification: part c. (Drawings by I. Gudenzi)

Fig. 1 – *Onthophagus (Furconthophagus) variegatus* (Fabricius, 1798) (Iran, Kerman prov., Bam).

Fig. 2 – *Onthophagus (s.str.) illyricus* (Scopoli, 1763) (Iran, Mazandaran prov., Namak Abrood).

Fig. 3 – *Onthophagus (Palaeonthophagus) aleppensis* Redtenbacher, 1843 (Iran, Shiraz prov., Seydan).

Fig. 4 – *Onthophagus (Palaeonthophagus) fissicornis* (Steven, 1809) (Iran, Mazandaran prov., 50 km S Chalus).

Fig. 5 – *Onthophagus (Palaeonthophagus) lemur* (Fabricius, 1781) (Iran, Tehran prov., Fasham).

Fig. 6 – *Onthophagus (Palaeonthophagus) lucidus* (Sturm, 1800) (Iran, Shiraz prov., Bakhtegan lake).

Material examined: Shiraz prov., Bakhtegan lake 1500 m; Shiraz prov., Seydan 1500 m.

***Onthophagus (Palaeonthophagus) dorsosignatus*** d'Orbigny, 1898

BALTHASAR, 1963: 335.

Type locality: Van Lake (Turkey).

Distribution: Armenia; Asia Minor, Iraq, Iran (BARAUD, 1992).

Male genital armature: ZUNINO, 1975: 187, tav. III, fig. 2.

Material examined: Shiraz prov., Seydan 1500 m; Mazandaran prov., Amir Kabir dam 2000 m.

***Onthophagus (Palaeonthophagus) fissicornis*** (Steven, 1809)

BALTHASAR, 1963: 349.

Type locality: Iberia (Georgia, Caucasus).

Distribution: South-Eastern Europe; Asia Minor, Middle East (BARAUD, 1992).

Male genital armature: fig. 4.

Material examined: Mazandaran prov., 50 km S Chalus.

***Onthophagus (Palaeonthophagus) flagrans*** Reitter, 1892

BALTHASAR, 1963: 351.

Type locality (restricted): "Transcaspienne" (Central Asia).

Distribution: Central Asia (Turkmenistan, Uzbekistan) (BALTHASAR, 1963). Iran (ZAIRI, 1976).

Male genital armature: ZUNINO, 1978: 114, tav. II, fig. 8.

Material examined: Shiraz prov., Izadkhast 1500 m; Shiraz prov., Bakhtegan lake, 1500 m; Shiraz prov., Neyriz 1500 m; Kerman prov., Bardsir 1600 m; Kerman prov., Jiraft 1400 m.

***Onthophagus (Palaeonthophagus) fracticornis*** (Preyssler, 1790)

BALTHASAR, 1963: 354.

Type locality: Bohemia (Czech Republic).

Distribution: Europe; Asia Minor, Middle East to Iran (ZIANI, 1995).

Male genital armature: PALESTRINI, 1981: 15, fig. 1 a.

Material examined: Mazandaran prov., Namak Abrood 1050 m; Ghilan prov., Masouleh 1400 m.

***Onthophagus (Palaeonthophagus) lemur*** (Fabricius, 1781)

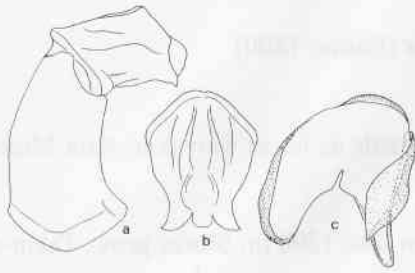
BALTHASAR, 1963: 416.

Type locality: Leipzig (Germany).

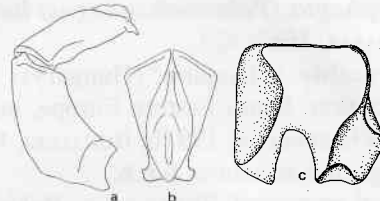
Distribution: Central and South Europe, Caucasus; Anatolia, Mongolia (ZIANI, 1995). Iran (BARAUD, 1968).

Male genital armature: fig. 5.

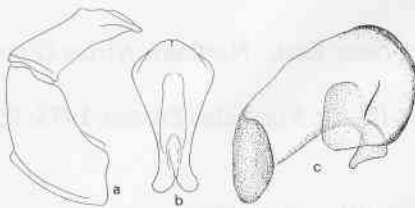
Material examined: Mazandaran prov., 50 km S Chalus; Mazandaran prov., Amir



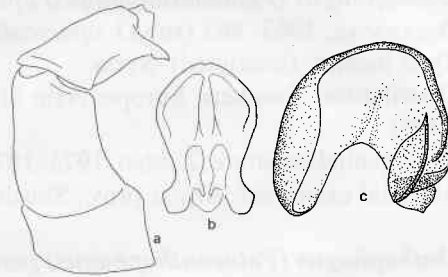
7



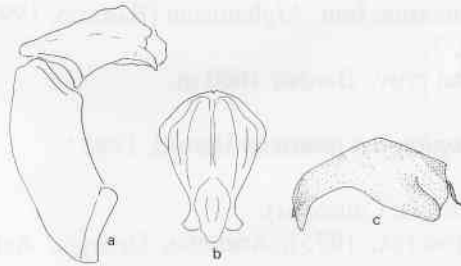
8



9



10



11

Figs. 7-11 – Male genitalia of *Onthophagus* sp.: a: aedeagus (lateral view); b: parameres (dorsal view); c: copulatory lamella of internal sac (ventral side). Scale: 0,5 mm. Lower magnification: parts a and b; higher magnification: part c. (Drawings by I. Gudenzi)

Fig. 7 – *Onthophagus* (*Palaeonthophagus*) *persianus* Olsoufieff, 1900 (Iran, Kerman prov., Bardsir).

Fig. 8 – *Onthophagus* (*Palaeonthophagus*) *ponticus* Harold, 1883 (Iran, Tehran prov., Fasham).

Fig. 9 – *Onthophagus* (*Palaeonthophagus*) *rechingeri* Petrovitz, 1980 (Iran, Shiraz prov., Seydan).

Fig. 10 – *Onthophagus* (*Palaeonthophagus*) *viridis* Ménétrière, 1832 (Iran, Mazandaran prov., Namak Abrood).

Fig. 11 – *Onthophagus* (*s.l.*) *heydeni* Harold, 1875 (Iran, Shiraz prov., Bakhtegan lake).

Kabir dam 2000 m; Ghilan prov., Masouleh 1400 m; Tehran prov., Fasham 1800 m.

***Onthophagus (Palaeonthophagus) lucidus* (Sturm, 1800)**

BALTHASAR, 1963: 421.

Type locality: "Hungaria" (Hungary).

Distribution: South-Eastern Europe, northwards as far as Slovakia; Asia Minor, Middle East (ZIANI, 1997b; BUNALSKI, 1999).

Male genital armature: fig. 6.

Material examined: Shiraz prov., Bakhtegan lake 1500 m; Shiraz prov., Takht-e-Jamshid 1400 m.

***Onthophagus (Palaeonthophagus) opacicollis* Reitter, 1892**

BALTHASAR, 1963: 461 (sub *O. opacicollis* d'Orbigny, 1897)

Type locality (restricted): Syria.

Distribution: Southern Europe; Asia Minor, Near East; Northern Africa (ZIANI, 1995).

Male genital armature: ZUNINO, 1975: 187, tav. III, fig. 5 (see also ZUNINO, 1978: 95).

Material examined: Ahvaz prov., Shush.

***Onthophagus (Palaeonthophagus) persianus* Olsoufieff, 1900**

BALTHASAR, 1963: 474.

Type locality: Astrabad (Iran).

Distribution: Armenia, Caucasus; Iran, Afghanistan (BARAUD, 1992).

Male genital armature: fig. 7.

Material examined: Kerman prov., Bardsir 1600 m.

***Onthophagus (Palaeonthophagus) ponticus* Harold, 1883**

BALTHASAR, 1963: 481.

Type locality: Mzchet (Georgia, Caucasus).

Distribution: Romania (IENISTEA, 1975), Armenia, Georgia; Asia Minor, Iran (BARAUD, 1992).

Male genital armature: fig. 8.

Material examined: Tehran prov., Fasham 1800 m.

Remarks: *O. ponticus* was collected in dog excrements, which confirms that such *Onthophagus* is not exclusively associated with rodents' nests.

***Onthophagus (Palaeonthophagus) rechingeri* Petrovitz, 1980 (Fig. 12)**

PETROVITZ, 1980: 605.

Type locality: Evine (Tehran, Iran).

Distribution: known from Iran only (PETROVITZ, l.c.).

Male genital armature: fig. 9.

Material examined: Shiraz prov., Seydan 1500 m.

Remarks: the Iranian entomologist Hamid Bostanchi gave us the possibility to

study specimens of *O. rechingeri* from other places: Azarbayjan-e Bakhtari prov., 35 km W Khoy, 27.VII.1998, Bostanchi leg. (Z. coll.); Tehran prov., Karaj mountains, 1.VI.1998, Bostanchi leg. (Z. coll.); Khorasan prov., 25 km E Bojnord, 7.V.1998, Bostanchi leg. (Z. coll.). We have got further data examining one female from Azarbayjan-e Bakhtari prov., Choplu 2000-2200 m, 30-31.V.1999, Saltini leg. (Saltini coll.).

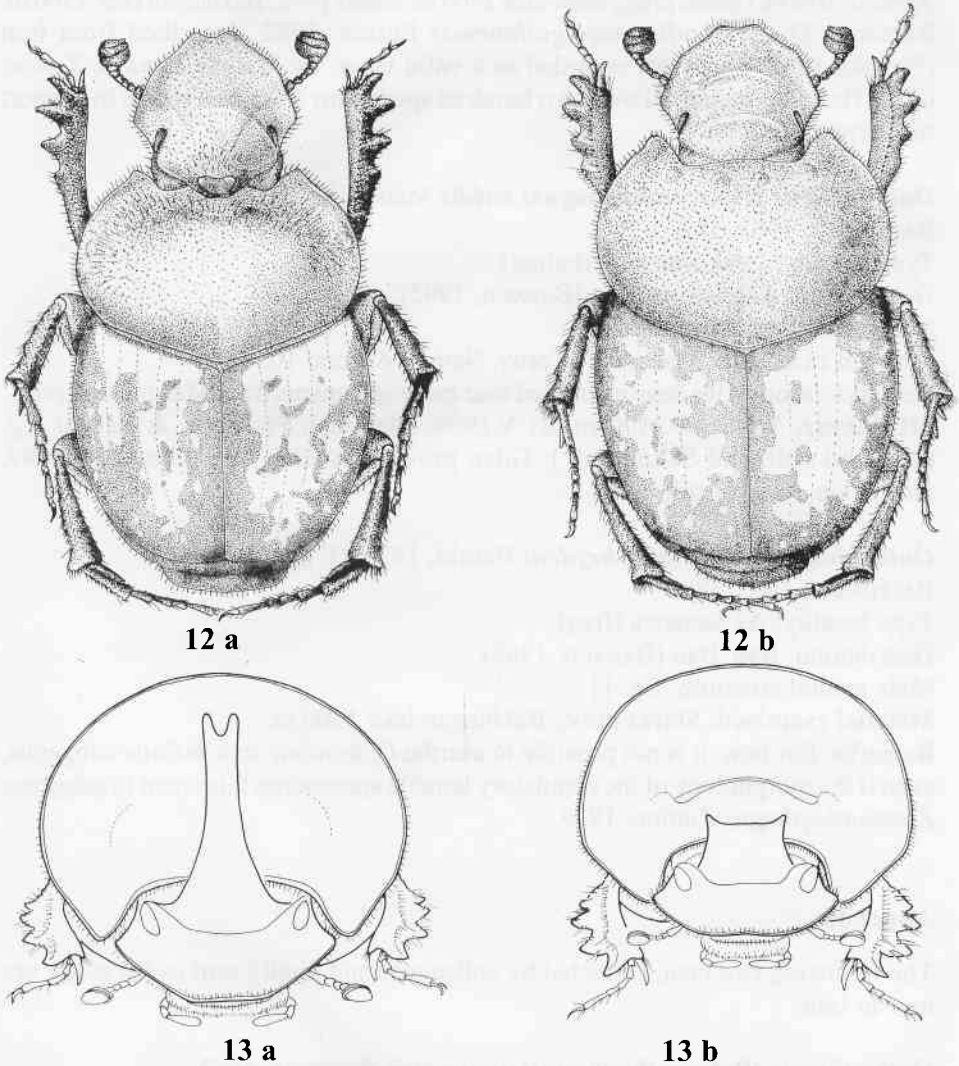


Fig. 12 – Habitus of *Onthophagus (Palaeonthophagus) rechingeri* Petrovitz, 1980: 12a. Male (Iran, Shiraz prov., Seydan); 12b. Female (Iran, Khorasan prov., 25 km E Bojnord). (Drawings by I. Gudenzi)

Fig. 13 – Head and pronotum (frontal view) of *Onthophagus (s.l.) heydeni* Harold, 1875 (Iran, Shiraz prov., Bakhtegan lake): 13a. Hypertelic male; 13b. Eutelic male. (Drawings by I. Gudenzi)

***Onthophagus (Palaeonthophagus) ruficapillus* Brullé, 1832**

BALTHASAR, 1963: 505.

Type locality: Morea (Peloponnesus, Greece).

Distribution: Central and Southern Europe; Asia Minor, Middle East (ZIANI, 1995).

Male genital armature: MARTÍN PIERA & ZUNINO, 1986: 438, fig. 1.

Material examined: Mazandaran prov., 50 km S Chalus; Mazandaran prov., Namak Abrood 1050 m; Ghilan prov., Masouleh 1400 m; Shiraz prov., Bakhtegan lake 1500 m.

Remarks: *O. ruficapillus* ssp. *guilanensis* Pittino, 1982, described from Iran (PITTINO, 1982a), was not regarded as a valid taxon by MARTÍN PIERA & ZUNINO (l.c.). The examination of over two hundred specimens from Iran seems to support this hypothesis.

***Onthophagus (Palaeonthophagus) viridis* Ménétrés, 1832**

BALTHASAR, 1963: 582.

Type locality: Lenkoran (Azerbaijan).

Distribution: Azerbaijan; Iran (BARAUD, 1992).

Male genital armature: fig. 10.

Material examined: Mazandaran prov, Namak Abrood 1050 m.

Remarks: besides, we have examined four more specimens from Mazandaran prov., Mt. Elburz, Valiabad 2100 m, 21.V.1999, Malmusi, Padovani & Saltini leg. (Malmusi coll. and Saltini coll.); Gilan prov., Masouleh-Mt. Talas, 23.V.1999, Saltini leg. (Saltini coll.).

***Onthophagus (sensu lato) heydeni* Harold, 1875 (Fig. 13)**

BALTHASAR, 1963: 380.

Type locality: As Samawa (Iraq).

Distribution: Iraq, Iran (BARAUD, 1968).

Male genital armature: fig. 11.

Material examined: Shiraz prov., Bakhtegan lake 1500 m.

Remarks: For now, it is not possible to ascribe *O. heydeni* to a definite subgenus, even if the morphology of the copulatory lamella approaches this taxon to subgenus *Eremonthophagus* Zunino, 1979.

## Appendix

The following two taxa, collected by colleagues and kindly sent us for study, are new to Iran.

***Onthophagus (Palaeonthophagus) angorensis* Petrovitz, 1963**

MARTÍN PIERA & ZUNINO, 1985: 244.

Type locality: Cubuk (Ankara, Turkey).

Distribution: Macedonia; Asia Minor, Israel (BARAUD, 1992). Bulgaria (KRAL &



MALY, 1993). Syria (KEITH, 1999). Lebanon (Jbail-Laklouk, 1400 m, 8/10.V.2000, G. Sama leg. 1 specimen: first record for Lebanon).

Male genital armature: MARTÍN PIERA & ZUNINO (l.c.): 243, figs. 6-10.

Material examined: Khorāsān prov., Aladag mts., Asadli (25 km S Bojnurd), 31.III./31.IV.1999, J. Kaláb leg. (Z. coll).

Remarks: first record for Iran.

### ***Onthophagus (Palaeonthophagus) carpanetoi* Pittino, 1982**

PITTINO, 1982b: 189.

Type localit : Abant G l  (Bolu, Turkey)

Male genital armature: PITTINO (l.c.): 193, fig. 5; ibidem: 196, figs. 22-23-24.

Distribution: Turkey, Jordan (PITTINO, l.c.).

Material examined: Azarbayjan-e Bakhtari prov., Choplu 2000-2200 m, 30.V.1999, Saltini leg. (Saltini coll.).

Remarks: first record for Iran.

### **Aknowledgements**

Thanks to: Alberto Ballerio (Brescia), Enrico Barbero (Turin University) and Marco Dellacasa (Pisa University) for their advice, Fernando Pederzani (Ravenna) for editorial advice, Riccardo Pittino (Milan) for several consultations, Ivan Loebl (Mus um d'Histoire naturelle, Gen ve) for loan of a part of Petrovitz's material preserved in the collections of the Museum, Mauro Malmusi and Luciano Padovani (Modena) and Lucio Saltini (Carp ), who let us study Iranian Scarabaeoidea in their collections, Hamid R. Bostanchi (Karaj) for kind cooperation. Special thanks to Roberto Bellini, Cinzia Camporesi, Rita Regoli and Roberta Simoncelli for their help on field, and to Nadia Camorani for the settlement of our English.

### **References**

- BALTHASAR V., 1963 - Monographie der Scarabaeidae und Aphodiidae der palaearktischen und orientalischen Region. Coleoptera Lamellicornia. Band 2. Ed. Tschechoslow. Akad. der Wissenschaften, Prag: 628 pp.
- BARAUD J., 1968 - Contribution   la faune de l'Iran. 10. Col opt res Scarabaeoidea. *Ann. Soc. ent. Fr. (N.S.)*, Paris, 4 (4): 915-925.
- BARAUD J., 1985 - Col opt res Scarabaeoidea: Faune du Nord de l'Afrique, du Maroc au Sin . Ed. Lechevalier, Paris: 650 pp.
- BARAUD J., 1992 - Col opt res Scarabaeoidea d'Europe. *F d ration Fran aise des Soci t s de Sciences Naturelles & Soci t  Linn enne de Lyon*, Paris-Lyon: 856 pp.
- BUNALSKI M., 1999 - Die Blatthornk fer Mitteleuropas. Coleoptera, Scarabaeoidea. Bestimmung, Verbreitung,  kologie. *F.Slamka*, Bratislava: 80 pp.
- IENISTEA M. A., 1975 - Die Onthophagiden Rumaniens (Coleoptera Scarabaeoidea). *Trav.*

- Mus. Hist. Nat. "Grigore Antipa"*, Bucarest, 16: 139-163.
- KEITH D., 1999 - Remarques biogéographiques sur quelques Scarabaeoidea du Bassin Méditerranéen Oriental. *Lambillionea*, Bruxelles, 99 (3): 469-471.
- KRAL D. & MALY V., 1993 - New records of Scarabaeoidea (Coleoptera) from Bulgaria. *Acta Soc. Zool. Bohem.*, Praha, 57: 17-29.
- MARTÍN PIERA F. & ZUNINO M., 1986 - Analisi sistematica, filogenetica e biogeografica di un gruppo di specie del sottogenere *Palaeonthophagus* Zunino, 1979 (Coleoptera, Scarabaeidae: genere *Onthophagus*): il gruppo *ovatus*. *Boll. Mus. reg. Sci. nat.*, Torino, 4 (2): 413-467.
- PALESTRINI C., 1981 - *Onthophagus fracticornis* (Preysl.) e *O. similis* (Scriba): status tassonomico e considerazioni zoogeografiche. *Boll. Mus. Zool. Univ.*, Torino, 2: 13-24.
- PETROVITZ R., 1980 - Österreichische Entomologische Expeditionen nach Persien und Afghanistan. Beiträge zur Coleopterenfauna. T. XII. Weiteres über Lamellicornia aus Iran. *Ann. Naturhistor. Mus. Wien*, 83: 597-638.
- PITTINO R., 1982a - Una nuova sottospecie iraniana di *Onthophagus ruficapillus* Brullé (Coleoptera Scarabaeidae). *Revue suisse Zool.*, Genève, 89 (2): 517-519.
- PITTINO R., 1982b - Due nuovi *Onthophagus* Latr. anatolici del gruppo *ovatus* (L.) (Coleoptera Scarabaeidae). *Fragm. Entomol.*, Roma, 16 (2): 189-203.
- ZAIRI M., 1976 - List of Scarabaeidae from province of Fars. Part 4 - *Journal of the Entomological Society of Iran*, Tehran, 3 (1-2): 125-127.
- ZIANI S., 1995 - Catalogo faunistico ed analisi zoogeografica degli Scarabaeoidea saproprofagi della "Romagna zangeriana" (Coleoptera, Scarabaeoidea). *Boll. Ass. Romana Entomol.*, Roma, 49 (3-4): 169-214 (1994).
- ZIANI S., 1997a - Novità e precisazioni su alcuni Scarabaeoidea laparosticti del bacino del Mediterraneo (Coleoptera). *Boll. Soc. ent. ital.*, Genova, 128 (3): 197-200.
- ZIANI S., 1997b - Scarabaeoidea laparosticti di Cipro: un primo quadro d'insieme sulla fauna dell'isola (Coleoptera). *Bioscosme Méditerranéenne*, Nice, 14 (1): 1-38.
- ZUNINO M., 1975 - Revisione delle specie paleartiche del sottogenere *Onthophagus* (sensu stricto) Latr. (Coleoptera, Scarabaeoidea): I tipi di H. d'Orbigny, A. Raffray e A. Boucomont nel Muséum National d'Histoire Naturelle di Parigi. *Boll. Mus. Zool. Univ.*, Torino, 7: 151-194.
- ZUNINO M., 1978 - Revisione delle specie paleartiche del sottogenere *Onthophagus* (sensu stricto) Latr. (Coleoptera, Scarabaeoidea): I tipi di E. Reitter ed E. Csiki. *Boll. Mus. Zool. Univ.*, Torino, 6: 75-122.
- ZUNINO M., 1979 - Gruppi artificiali e gruppi naturali negli *Onthophagus* (Coleoptera Scarabaeoidea). *Boll. Mus. Zool. Univ.*, Torino, 1: 1-18.

---

Authors' addresses:

Stefano Ziani

via San Giovanni, 41/a I-47014 Meldola (FC)

e-mail: stefanoziani@libero.it

Ivo Gudenzi

via S. Corbari, 32 I-47100 Forlì