

ARTIGO / ARTÍCULO / ARTICLE

Review of the Portuguese fauna of the subtribe Paederina
Fleming, 1821 (Coleoptera: Staphylinidae: Paederinae)

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Abstract: In this paper the Portuguese fauna of the subtribe Paederina Fleming, 1821 (Coleoptera: Staphylinidae: Paederinae) is reviewed, with the addition of a new species and new locations that enlarge their geographic distribution along the country.

Key words: Coleoptera, Staphylinidae, Paederinae, Paederina, ecology, faunistics, Portugal.

Resumo: Revisão da fauna portuguesa da tribo Paederina Fleming, 1821 (Coleoptera: Staphylinidae: Paederinae). Revisa-se neste artigo a fauna portuguesa da subtribo Paederina Fleming, 1821 (Coleoptera: Staphylinidae: Paederinae), acrescentando uma nova espécie e novas localidades que alargam a sua distribuição geográfica pelo país.

Palavras chave: Coleoptera, Staphylinidae, Paederinae, Paederina, ecologia, faunística, Portugal.

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Introduction

The subtribe Paederina Fleming, 1821 (Coleoptera: Staphylinidae: Paederinae) is apparently a monophyletic group with very similar genera to *Paederus* Fabricius, 1775 *sensu lato* according to Herman (1981) or Frank (1988) amongst others. According to the *Catalogue of Life Checklist*, the Paederina fauna, species rich not only in the Western Palaearctic and the Afrotropical region, also in South and Eastern Palaearctic (Himalaya, China, Japan), includes 725 species and 56 subspecies (Bánki *et al.*, 2023), while it is represented by seven genera in the Palaearctic area and only four genera in Portugal (Schülke & Smetana, 2015): *Labopaederus* Scheerpeltz, 1957 with one species; *Paederidus* Mulsant & Rey, 1878, with two species; *Paederus* Fabricius, 1775, with eight subgenera in the Palaearctic region and four in Portugal with one species each (*Eopaederus* Scheerpeltz, 1957; *Harpopaederus* Scheerpeltz, 1957; *Paederus s. str.* Fabricius, 1775; and *Poederomorphus* Gautier, 1862); and *Parameropaederus* Scheerpeltz, 1957, with one species.

The subtribe Paederina is composed of mostly medium sized insects, often brightly coloured, fast running, predatory and easy to recognize beetles. They are found in wet habitats, usually at the edge of brooks, rivers, lakes and ponds or wet leaf litter.

Some species of *Paederus* are well known because of their medical importance (Frank & Kanamitsu, 1987; Rahmah & Norjaiza, 2008) caused by the toxic substance pederin (C₂₅H₄₅O₉N), a toxin more potent than that of *Latrodectus* spider venom and the most complex nonproteinaceous insect defensive secretion known (Krinsky, 2019), released when disturbed or accidentally brushed or crushed that, if contacts the skin, causes vesicating dermatitis (blisters), an irritation that can persist for weeks, causing absentism in school and productivity loss.

Material and methods

The material studied was collected by the author as university student and during visits to the country, as well as from literature surveyed to obtain the exact pages of the original descriptions of the species reported from Portugal. The preparation of the species follows Ferreira (2021). The nomenclature and classification suggested by Schülke & Smetana (2015) was followed in this study. Morphological studies were conducted by using a Wild M5 Stereomicroscope and the keys for identification by Coiffait (1982). All specimens are deposited in the author's collection (RNFC). New data includes: Province, District, Town, Village and Place.

Results

Família STAPHYLINIDAE Latreille, 1802

Subfamily PAEDERINAE Fleming, 1821

Tribe PAEDERINI Fleming, 1821

Subtribe PAEDERINA Fleming, 1821

Genus *Lobopaederus* Scheerpeltz, 1957

Lobopaederus cephalotes Motschulsky, 1849

=*Paederus meridionalis* Fauvel, 1873

Boieiro *et al.* (2001) record this species from Mora, 30/05/1975, 1 ex., as *Lobopaederus meridionalis* (Fauvel, 1872). Gamarra & Outerelo (2020) report this species from Alto Alentejo.

New data: Minho, Viana do Castelo, Valença, S. Pedro da Torre, 10/10/1961, 1 ex., leg. R.N. Ferreira (RNFC).

Distribution: Recorded from France, Italy, Spain, Portugal, Algeria, Morocco and Tunisia (Schülke & Smetana, 2015).

Genus *Paederidus* Mulsant & Rey, 1878

Paederidus algericus antoinei Koch, 1937

New data: Beira Litoral, Leiria, Leiria, Mata de Leiria, 6/05/1967, 4 ex., leg. R.N. Ferreira (RNFC).

Distribution: This species has been recorded in Spain and Morocco (Schülke & Smetana, 2015). First record from Portugal.

Paederidus rubrothoracicus (Goeze, 1777)

Barros (1928) records this species from Mata de Leiria as common, close to water. Seabra (1932, 1939) reports it from Mata de Leiria, while Seabra (1943) cites Barros. Ferreira (1962) reports this species from Portugal without any locality. Gamarra & Outerelo (2020) report this species from Beira Litoral.

New data: Minho, Viana do Castelo, Valença, S. Pedro da Torre, Portilhão, 27/06/1966, 13 ex., leg. R.N. Ferreira (RNFC). Trás-os-Montes e Alto Douro, Vila Real, Vila Real, Vila de P. de Águas, 2/07/1971, 2 ex., leg. R.N. Ferreira (RNFC). Beira Litoral, Coimbra, Coimbra, Choupal, 25/03/1961, 2 ex., leg. R.N. Ferreira (RNFC); 12/05/1962, 11 ex., leg. R.N. Ferreira (RNFC); 11/06/1962, 2 ex., leg. R.N. Ferreira (RNFC); 25/03/1963, 1 ex., leg. R.N. Ferreira (RNFC); 12/05/1967, 2 ex., leg. R.N.

Ferreira (RNFC); 12/06/1967, 2 ex., leg. R.N. Ferreira (RNFC); Coimbra, Penacova, 5/04/1971, 1 ex., leg. R.N. Ferreira (RNFC); 8/04/1971, 1 ex., leg. R.N. Ferreira (RNFC); Coimbra, Portela, 6/08/1967, 2 ex., leg. R.N. Ferreira (RNFC).

Distribution: Widespread in Europe, this species is also present in Turkey and Cyprus (Schülke & Smetana, 2015).

***Paederidus ruficollis* (Fabricius, 1781)**

= *Paederidus ruficollis hispano-lusitanus* Scheerpeltz, 1957

Heyden (1870) records this species from the vicinity of Guarda, Aveiro, and Borrageiro (in Serra do Gerês). Oliveira (1893) records it as very common all over the country, close to water. Fuente (1922) reports it from Aveiro, Guarda and Serra do Gerês (meaning Borrageiro, in the latter) citing Heyden. Seabra (1939): Aldeia Nova de S. Bento, Coimbra, Foz do rio Lis, Jugueiros, Mata de Leiria, Mata de Mira, Mata do Urso, Soure. Seabra (1943) cites Heyden. Scheerpeltz (1957) describes the ssp. *hispano-lusitanus*, with no precise localities. Scheerpeltz (1960) reports the same species from Gerês 31/05-2/06/1959, 1♂ and 1♀; Serra da Estrela, Penhas da Saúde, 4-6/06/1959, 1♀. Ferreira (1962) mentions the species from Portugal. Boieiro *et al.* (2001) record the species from Serra do Gerês, 3/06/1980, 4 ex., and 18/10/1982, 2 ex.; Águas de Moura, 5/05/1981, 9 ex.; Odeceixe, 15/05/1982, 2 ex.; Beja, 14/03/1983, 6 ex. Gamarra & Outerelo (2020) report the species from Minho, Beira Alta, Beira Litoral, Estremadura and Baixo Alentejo. Ferreira (2021) records this species from Caldelas, 7 ex., and Caldelas (Rio Homem), 2 ex., from the Ramiro Neves collection.

New data: **Minho**, Braga, Vieira do Minho, Serra do Gerês, 9/06/1969, 2 ex., leg. R.N. Ferreira (RNFC). **Douro Litoral**, Porto, Espinho, 2/11/1969, 3 ex., leg. R.N. Ferreira (RNFC). **Beira Litoral**, Coimbra, Coimbra, Choupal, 12/05/1962, 1 ex., leg. R.N. Ferreira (RNFC), **Leiria**, Leiria, Mata de Leiria, 20/04/1969, 8 ex., leg. R.N. Ferreira (RNFC); **Algarve**, Faro, Monchique, Serra de Monchique, 2/07/1980, 1 ex., leg. R.N. Ferreira (RNFC).

Distribution: Widespread in Europe, also present in Algeria, Morocco, Tunisia, Iran and Turkey (Schülke & Smetana, 2015).

Genus *Paederus* Fabricius, 1775

***Paederus (Eopaederus) caligatus* Erichson, 1840**

Heyden (1870) records this species from the vicinity of Guarda. Oliveira (1893) mentions this species as common all over the north of Portugal. Fuente (1922) quotes Oliveira. Seabra (1939) reports it from Afife, Aldeia Nova de S. Bento, Buarcos, Caminha, Évora, Herdade da Mitra, Mata de Foja, Foz do rio Lis, Mata de Leiria, Mata da Leirosa, Ovar, Serra do Gerês, while Seabra (1943) cites Heyden. Scheerpeltz (1960) records it from Estremadura, São Pedro de Muel, 28-30/06/1959, 1♀. Ferreira (1962) mentions the species from Portugal with no localities. Coiffait (1963) finds it in Miranda do Douro. Boieiro *et al.* (2001) record this species from Tourém, 9/01/1981, 2 ex. Gamarra & Outerelo (2020) report this species from Trás-os-Montes e Alto Douro and Estremadura. Ferreira (2021) records it from Monte Córdova, 2 ex., Oliveira de Azeméis, 1 ex., Vila de Punhe (Chasqueira), 4 ex., and without locality, 6 ex., and with No. 7, 6 ex., from the Ramiro Neves collection.

New data: **Minho**, Viana do Castelo, Valença, S. Pedro da Torre, 11/09/1962, 4 ex., leg. R.N. Ferreira (RNFC), S. Pedro da Torre, Fonte do Burro, 22/06/1966, 1 ex., leg. R.N. Ferreira (RNFC). **Trás-os-Montes e Alto Douro**, Vila Real, Boticas, Vidago, 2/04/1951, 2 ex., leg. A. Moura (RNFC); Bragança, Bragança, Rebordões, 25/04/1961, 1 ex., leg. R.N. Ferreira (RNFC). **Douro Litoral**, Porto, Paços de Ferreira, Penacova, 8/06/1963, 2 ex., leg. R.N. Ferreira (RNFC). **Beira Litoral**, Coimbra, Montemor-o-Velho, Tentúgal, 30/03/1961, 1 ex., leg. R.N. Ferreira (RNFC). **Alto Alentejo**, Portalegre, Alegrete (Muralha), 8/07/1978, 1 ex., leg. R.N. Ferreira (RNFC).

Distribution: Widespread in Europe (Schülke & Smetana, 2015).

***Paederus (Harpopaederus) fuscipes fuscipes* Curtis, 1826**

Fauvel (1877) records this species from Coimbra. Oliveira (1893) records it from Coimbra, Vizela and Estarreja. Fuente (1922) quotes Oliveira. Seabra (1939) adds Foz do rio Liz, Mata de Foja, Mata de Quiaios, Pragal. Seabra (1943) cites Fauvel. Ferreira (1962) reports the species from Portugal, while Ferreira (1970) records it from Eirol, Pateira de Fermentelos, 22/07/1967 and Ceira, 10/04/1968. Gamarra & Outerelo (2020) report the species from Minho, Douro Litoral and Beira Litoral. Ferreira (2021) cites this species from Portugal with No. 6, 1 ex. and No. 9, 2 ex., from the Ramiro Neves collection.

Distribution: Species common and widespread in the Palaearctic region (Schülke & Smetana, 2015).

***Paederus (Paederus) riparius* (Linnaeus, 1758)**

=*Staphylinus gregarius* Scopoli, 1763

Oliveira (1893) mentions the species as *Paederus gregarius* L. from Bragança. Barros (1926) records it from Leça de Palmeira. Seabra (1939) reports it from Herdade da Mitra, Serra do Buçaco e Serra do Marão, while Seabra (1943) cites Oliveira and Barros. Ferreira (1962) reports the species from Portugal and the variety *gregarius* without locality. Aguiar & Serrano (1995) records it from Atrozela (Cascais). Gamarra & Outerelo (2020) report the species from Douro Litoral and Estremadura. Ferreira (2021) records the species from Pedras Salgadas, 2 ex., and without locality, 4 ex., from the Ramiro Neves collection.

Distribution: This species is widespread in Europe, also present in Algeria, Egypt, Siberia, Middle Asia, Iran and Turkey (Schülke & Smetana, 2015).

***Paederus (Poederomorphus) littoralis littoralis* Gravenhorst, 1802**

=*Paederus finisterrae* Illiger, 1807

Illiger (1807) shortly describes *Paederus finisterrae* from Portugal. Fuente (1922) attributes a record from Bragança to Oliveira, who did not record this species from that locality. Seabra (1943) cites Fuente. Ferreira (1962) reports the species from Portugal without any locality. Gamarra & Outerelo (2020) report the species from Trás-os-Montes e Alto Douro.

New data: **Minho**, Viana do Castelo, Valença, S. Pedro da Torre, 19/10/1967, 1 ex., leg. R.N. Ferreira (RNFC). **Trás-os-Montes e Alto Douro**, Vila Real, Vila Real, Arróis, 7/11/1968, 1 ex., leg. R.N. Ferreira (RNFC). **Beira Alta**, Guarda, Guarda, Vila Garcia, 5/07/1966, 1 ex., leg. R.N. Ferreira (RNFC). **Beira Litoral**, Coimbra, Coimbra, Campos do Mondego, 5/11/1966, 1 ex., leg. R.N. Ferreira (RNFC); Coimbra, Pinhal de Marrocos, 19/05/1961, 1 ex., leg. R.N. Ferreira (RNFC); **Leiria**, Ansião, Avelar, 2/05/1960, 1 ex., leg. R.N. Ferreira (RNFC). **Estremadura**, Lisboa, Lisboa, Vale do Jamor, 11/10/1961, 1 ex., leg. R.N. Ferreira (RNFC). **Algarve**, Faro, Olhão, Pinhal do Marim, 2/03/1961, 1 ex., leg. R.N. Ferreira (RNFC).

Distribution: Widespread in Europe, also present in Algeria, Cyprus, Iran, Turkey and west Siberia (Schülke & Smetana, 2015).

Genus *Parameropaederus* Scheerpeltz, 1957

***Parameropaederus lusitanicus* (Aubé, 1842)**

Aubé (1842) describes the species based on material collected in Portugal by Deyrolle. Heyden (1870) reports it from Seia and Borrageiro. Quedenfeldt (1884) records it from Cea, in Serra da Estrela. Oliveira (1893) records it from Seia and Gerês (meaning Borrageiro), and cites Heyden for the latter. Fuente (1922) quotes Heyden, Oliveira, and Quedenfeldt. Seabra (1943) cites Heyden. Ferreira (1962) reports this species from Portugal without any locality. Aguiar & Serrano (1995) cite it from Cascais: Atrozela, Carcavelos (Quinta), Ribeira de Caparide (Caparide). Boieiro *et al.* (2001)

record it from Oeiras, 8/03/1980, 1 ex., and 13/11/1978, 4 ex.; Veiros, 9/12/1979, 1 ex.; Serra de Monsanto, 01/1981, 1 ex.; Pitões das Júnias, 31/03/1981, 2 ex.; Castro Marim, 11/06/1981, 5 ex.; 18/06/1982, 1 ex.; 2/07/1983, 1 ex.; Tavira, 12/06/1981, 2 ex.; Vila Nova de Milfontes, 31/03/1982, 1 ex.; Coruche, 11/04/1982, 1 ex. Serrano (1983) records it in Oeiras, 02/1976. Gamarra & Outerelo (2020) report this species from Trás-os-Montes e Alto Douro, Estremadura, Ribatejo, Alto Alentejo and Algarve. Ferreira (2021) records this species from Monte Córdova, 5 ex., and Penamaior, 4 ex., from the Ramiro Neves collection.

New data: **Minho**, Viana do Castelo, Valença, S. Pedro da Torre, 10/10/1961, 8 ex., leg. R.N. Ferreira (RNFC); S. Pedro da Torre, 10/07/1962, 1 ex., leg. R.N. Ferreira (RNFC). **Douro Litoral**, Porto, Porto, Afurada, 9/07/1942 (Ex. col. Padre Ramiro) (RNFC). **Beira Alta**, Castelo Branco, Fundão, 3/07/1962, 1 ex., leg. R.N. Ferreira (RNFC). **Beira Litoral**, Aveiro, Aveiro, Eiol, Pateira de Fermentelos, 21/08/1967, 2 ex., leg. R.N. Ferreira (RNFC); 24/08/1967, 1 ex., leg. R.N. Ferreira (RNFC); 22/10/1967, 1 ex., leg. R.N. Ferreira (RNFC), 22/09/1968, 1 ex., leg. R.N. Ferreira (RNFC); Pateira da Horta, 10/08/1970, 5 ex., leg. R.N. Ferreira (RNFC); 10/09/1970, 13 ex., leg. R.N. Ferreira (RNFC); Eiol, IDESO, 10/08/1971, 1 ex., leg. R.N. Ferreira (RNFC); IDESO, 22/08/1969, 1 ex., leg. R.N. Ferreira (RNFC); Eiol, 25/03/1971, 5 ex., leg. R.N. Ferreira (RNFC); Coimbra, Coimbra, Ceira, 10/04/1968, 1 ex. leg. R.N. Ferreira (RNFC); Coimbra, Montemor-o-Velho, S. Eulália, 24/04/1969, 3 ex., leg. R.N. Ferreira (RNFC); Coimbra, Figueira da Foz, 28/07/1971, 1 ex., leg. R.N. Ferreira (RNFC); Leiria, Ansião, Avelar, 8/07/1967, 1 ex., leg. R.N. Ferreira (RNFC). **Baixo Alentejo**, Setúbal, Grândola, Ribeira do Canal, 23/11/1958, 1 ex., leg. A. Diniz (RNFC).

Distribution: Known from Portugal and Spain (Schülke & Smetana, 2015).

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