

**NOTES ON THE DISTRIBUTION OF
PHYLLOGNATHUS DIONYSIUS FABRICIUS IN PAKISTAN
(Coleoptera, Scarabaeoidea, Dynastidae)**

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Abstract : The occurrence of the dynastid beetle *Phyllognathus dionysius* Fabricius, 1792 in Pakistan is confirmed. The distribution of the species was studied based on recent records and a distribution map for *P. dionysius* in Pakistan is provided.

Résumé : La présence de l'espèce de dynastes *Phyllognathus dionysius* Fabricius, 1792 au Pakistan est confirmée. Sa répartition est précisée sur base de collectes récentes et une carte de distribution de *P. dionysius* au Pakistan est fournie.

Keywords : Coleoptera, Scarabaeoidea, Dynastidae, Pentodontini, *Phyllognathus dionysius*, Palearctic region, Pakistan, distribution.

Introduction

The genus *Phyllognathus* Eschscholtz, 1830 comprises 5 species which are distributed in the Ethiopian, Palearctic and Oriental regions (KRAJCIK, 2005). Of these, the species *P. dionysius* Fabricius (figures 1-7) is widely distributed in the Indian sub-continent.

Phyllognathus dionysius was described by FABRICIUS (1792) from "*Habitat Tranquebariae*" located in the south-eastern part of India. Since that time, the species has been found to be distributed in several states in that country: Andra Pradesh, Bihar, Haryana Himachal Pradesh, Karnataka, Madhya Pradesh, Maharashtra, Mysore, Orissa, Punjab, Rajasthan, Sikkim, Tamil Nadu, Uttar Pradesh, Uttaranchal and West Bengal (ARROW, 1910; ARROW, 1921; ENDRÖDI, 1969; CHANDRA, 2000; KRELL, 2006; CHANDRA & AHIRWAR, 2007; CHANDRA & UNİYAL 2007).

The species was first recorded from Nepal by HOPE in GRAY (1831) under the name *Oryctes haworthi* and, later on, was recorded in that country by the following authors : ENDRÖDI (1968) who erroneously reported a first record for Nepal, ENDRÖDI (1969), ENDRÖDI (1985), MIZUNUMA (1999), YUBAK DHOJ *et al.* (2005) and YUBAK DHOJ *et al.* (2008).

WALKER (1859) described *Xylotrupes reductus* from Ceylon, which has since been recognized as a junior synonym of *Phyllognathus dionysius* Fabricius. The species has subsequently been confirmed to occur on this island (ARROW, 1910; ENDRÖDI, 1968; ENDRÖDI, 1969; ENDRÖDI, 1985; MIZUNUMA, 1999).

The first records of the occurrence of *P. dionysius* in Pakistan was presented by SIDDIQUI *et al.* (2005) who indicated the presence of this species at two localities in the Pakistani province of Punjab. These records were not surprising because ARROW in 1921 had already reported that 15 specimens of this species had been collected in Kutola in the Indian province of Punjab.

SIDDIQUI *et al.* (2005) did not explicitly state that their records represented the first citation of *P. dionysius* in Pakistan.

In this paper, we confirm the occurrence of *Phyllognathus dionysius* in Pakistan based on data obtained from several recently collected specimens of this species from different parts of the country. This has allowed us to also better define the geographic distribution of *P. dionysius* and to present a distribution map for this species in Pakistan.

The occurrence of *P. dionysius* in Vietnam (Saïgon) first reported by ENDRÖDI (1969) seems rather doubtful and needs to be confirmed, together with the record from the island of Taiwan reported by KRELL (2006).



Figures 1-7. *Phyllognathus dionysius* Fabricius, 1792 (coll. ADC) : Swat region, VI.2008, leg. M. Atique Akhter : 1. Lateral view, minor male; 2. Lateral view, major male; 3. Lateral view, female; 4. Dorsal view, minor male; 5. Dorsal view, major male; 6. Dorsal view, female; 7. Views of the male paramera (pictures by Noël MAL, colour plate prepared by Noël MAL & Jochen-P. SALTIN).

Collections examined

ADC : Alain Drumont collection (Bruxelles, Belgium)

DKC : Denis Keith collection (Chartres, France)

IRSNB : Institut royal des Sciences naturelles de Belgique (Bruxelles, Belgium)

JPSC : Jochen-P. Saltin collection (Niedernhausen/Ts., Germany)

LNC : Laszló Nadai collection (Budapest, Hungary)

Studied material

40 specimens (27 males, 13 females) : **Punjab** : 2 males, 3 females, Mianwali, Bhakkar, 23.V.2008, leg. M. Atique Akhter (ADC); **North-West Frontier province** : 7 males, 6 females, Swat region, VI.2008, leg. M. Atique Akhter (ADC); 3 males, same locality, 21-22.V.2008 (JPSC); 2 males, same locality, 25.V.2008 (JPSC); 1 male, same locality, 8.VI.2008 (JPSC); 6 males, 2 females, Swat region, Mingora, 16-24.V.2008 (JPSC); 2 males, idem (ADC); 1 male, Swat region, Mata, 16.VI.2008, leg. M. Atique Akhter (ADC); 1 male, Kozabanda (= Kuza Bandai), Batgram, 34°37.566N-073°02.048E, 1246 m., 28.VI.2009, leg. M. Atique Akhter (ADC); 1 female, Swat region, Ilam, VI.2008, leg. M. Atique Akhter (ADC); **Azad Kashmir** : 1 male, Himalaya Mts., 20 km S Muzaffarabad, Nara Village, 750 m, 31°01'N- 73°29'E, 20.V.1998, leg. Gy. M. Laszló & G. Ronkay (LNC); **Balouchistan** : 1 female, Quetta, 6.IV.2007, leg. M. Atique Akhter (DKC); **Federally Administrated Tribal Areas** : 1 male, Parachinar, XI.2006 (LNC). Some voucher specimens will be deposited in the IRSNB.

Results and discussion

The examination of locality data obtained from the 40 specimens used in this study demonstrates (see distribution map provided) that *Phyllognathus dionysius* is widely distributed in the northern half of Pakistan. The apparent absence of this species in the southern part of the country is probably best explained by the absence of available data in the literature and in the collections examined from this part of the country. Because the species also occurs in the Rajasthan state of India, we would expect that the species is also present in the south-western part of Pakistan.

From our data, it is clear that *P. dionysius* shows a preference for the plain habitats in Pakistan, and occurs most often below 2.000 meters elevation. This habitat preference should not restrict its potential occurrence in the southern part of the country, but will make its discovery unlikely in the mountainous northern part of Pakistan where elevation can reach 5.000 meters.

Based on our results, the species should also probably occur in the eastern part of Afghanistan in the areas surrounding Jalalabad (near Kabul).

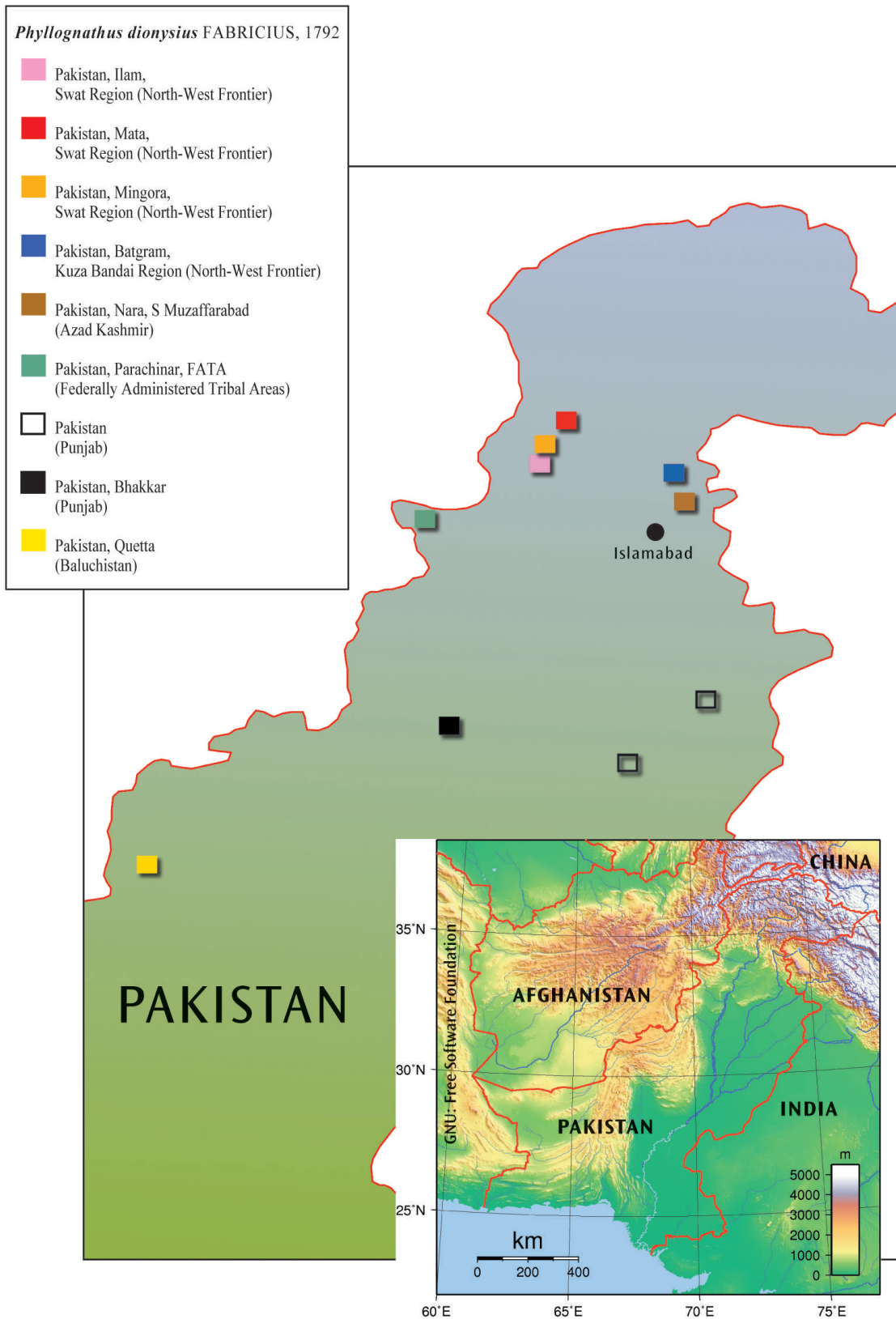
The confirmation of the occurrence of *P. dionysius* in Pakistan also represents a new country record for the Palaearctic region as defined by LÖBL & SMETANA (2003). It extends the distribution of the species considerably in the western part of its geographic range in the Indian subcontinent.

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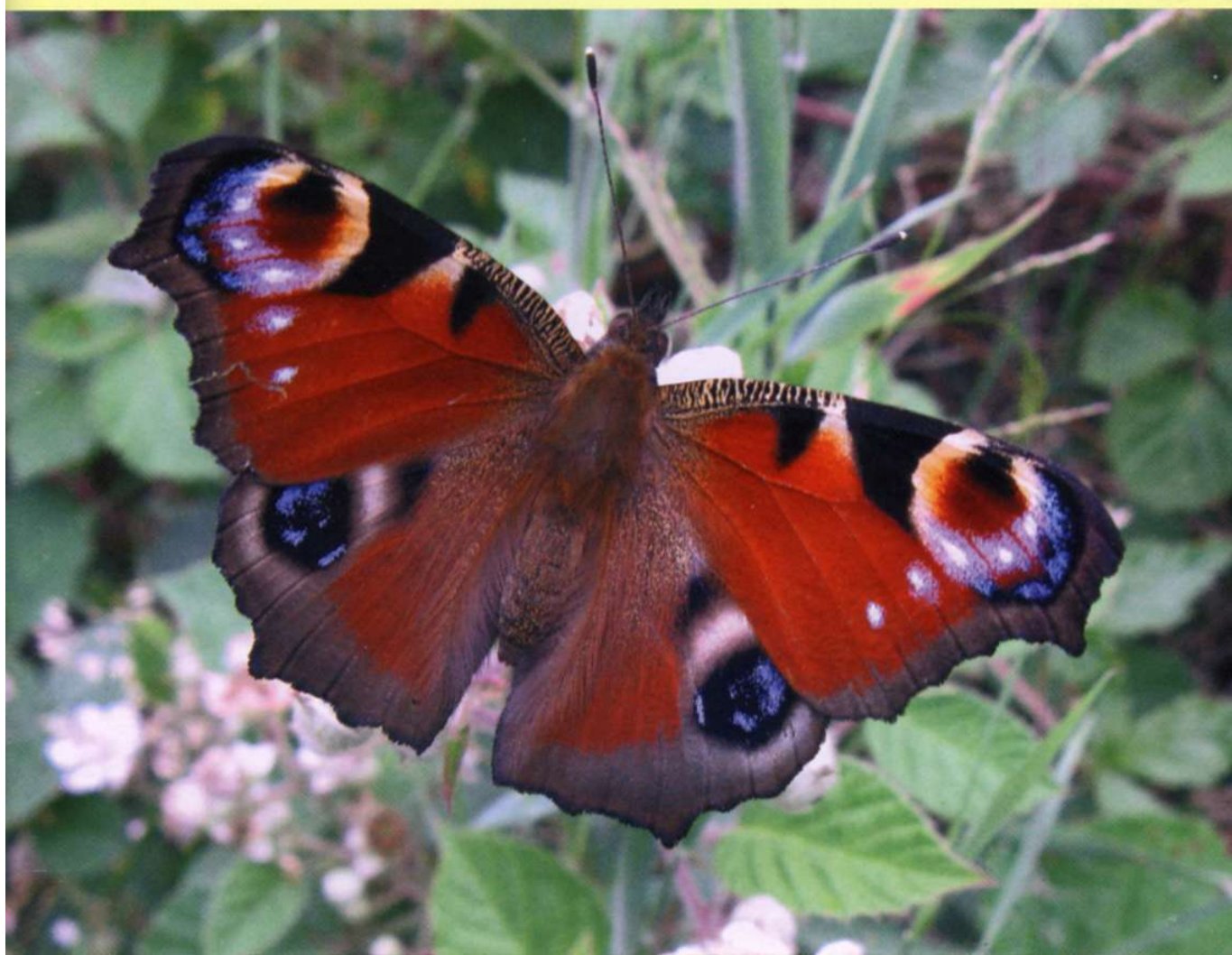
Distribution map of *Phyllognathus dionysius* in Pakistan

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