

BOOK REVIEW

WARCHAŁOWSKI A. 2010: THE PALAEARCTIC CHRYSOMELIDAE. IDENTIFICATION KEYS. VOL. 1 & 2. Natura Optima Dux Foundation, Warszawa, 1212 pp., 102 colour plates. ISBN 978-83-918040-9-4. Price EUR 240.00.

In 2010, two crucial publications for specialists in the taxonomy of Chrysomelidae of the Palaearctic region were published: the sixth volume of the catalogue of Palaearctic beetles (Löbl & Smetana, 2010) and a two-volume book with keys for identifying Palaearctic Chrysomelidae (Warchałowski, 2010).

Prof. Andrzej Warchałowski based his two volume book on the results of his lifetime study of Palaearctic Chrysomelidae. He compiled most of the information from original descriptions, papers published by other authors and his own experience and produced comprehensive keys for identifying Palaearctic species. The keys for some genera were completely new, others were adopted from the papers of other authors and some only modified for this publication. Whenever possible, he produced new drawings of aedeagi or adopted those in other publications. At the end of the second volume there are 102 colour plates with photographs of 918 species.

Although both volumes are remarkably good I have some criticisms. First, the author used an out-of-date system for classifying Chrysomelidae according to Seeno & Wilcox (1982). Recently proposed systems (e.g., Löbl & Smetana, 2010; Bouchard et al., 2011) often divide Chrysomelidae s. lat. into three families (Orsodacnidae, Megalopodidae and Chrysomelidae) and bruchids are included in the subfamily Bruchinae, the

problems that arose during the preparation of the above mentioned sixth volume of the Palaearctic catalogue (with a deadline of 2009) were published later and, thus, were left out. Another discrepancy between these books is geographical as they use different concepts of the Palaearctic region. While Warchałowski's book includes chrysomelids from within the traditional boundaries of the Palaearctic region, the catalogue of Palaearctic beetles includes those from a more extensive area including the southern provinces of China, Himalayan subregion and provinces of northern India and Pakistan.

For the purpose of this review it is impossible to check all the keys and compare them with the huge literature on Chrysomelidae. However, I have found some mistakes. Although the author strictly respects the borders of the Palaearctic defined in the Introduction, from time to time the keys include also extralimital species, for example, two species of *Pachybrachis* (sbg. *Thehylankus*): *P. insularis* from Sri Lanka and *P. indicus* from South India (both on page 175), or two species of *Calomicrus*: *C. persimilis* from Laos and Vietnam and *C. kimotoi* from Myanmar (p. 676). *Phyllotreta tenuimarginata*, a species with broad yellow bands on its elytra, is placed into auxiliary group C (species unicolorous black or with a metallic uppersurface) (p. 953). *Luperus graecus* is included in the genus *Luperus* (p. 696) and incorrectly also in the genus *Calomicrus* (p. 674). Although it is a black species, it is described as a species of *Calomicrus* with a yellow dorsum.

I have also found that some species are not included (most from marginal areas of the Palaearctic region):

Cassidinae	<i>Dicladispa occator</i> (Brullé, 1839)	Canary Islands
Cassidinae	<i>Hypocassida convexipennis</i> Borowiec, 2000	Iran
Chrysomelinae	<i>Hydrothassa bicolora</i> Rapilly, 1981	Iran
Alticinae	<i>Angulaphthona latipennis</i> (Pic, 1921)	Egypt, Saudi Arabia, Yemen
Alticinae	<i>Angulaphthona scherereri</i> Gruev, 1981	Saudi Arabia, Yemen
Alticinae	<i>Yemenaltica scortecii</i> Scherer, 1985	United Arab Emirates, Oman, Yemen
Cryptocephalinae: Cryptocephalini	<i>Cryptocephalus convergens</i> Sassi, 2001	Andorra, France, Italy, Spain, Switzerland
Cryptocephalinae: Fulcidacini	<i>Chlamisus aegyptiacus</i> (Desbrochers des Loges, 1898)	Egypt, Saudi Arabia
Eumolpinae	<i>Eryxia coracina</i> Lopatin, 1996	Iran
Eumolpinae	<i>Eryxia socotrana</i> Gahan, 1903	Yemen (Socotra)
Eumolpinae	<i>Euryope subserricornis</i> (Latreille, 1806)	Saudi Arabia, Yemen
Eumolpinae	<i>Macrocoma zarudnii</i> Lopatin, 1985	Iran
Eumolpinae	<i>Microeurydemus africanus</i> (Jacoby, 1900)	Saudi Arabia
Eumolpinae	<i>Microeurydemus flavescens</i> (Bryant, 1942)	Oman, Saudi Arabia, Yemen
Eumolpinae	<i>Microeurydemus semivittatus</i> (Jacoby, 1899)	United Arab Emirates, Saudi Arabia, Yemen
Eumolpinae	<i>Microeurydemus wraniki</i> Lopatin, 1994	Yemen
Eumolpinae	<i>Pathius maculatus</i> (Bryant, 1957)	Yemen
Eumolpinae	<i>Phascus pallidus</i> Lefèvre, 1884	Saudi Arabia

sister group to the Sagrinae. In Warchałowski's book these recent systems are neither mentioned nor discussed and without any explanation the Bruchinae are not included.

The deadline for the acceptance of species descriptions as well as taxonomical changes was stated to be 2004 and later descriptions and taxonomical papers are not included. I consider this as unfortunate because many papers resolving taxonomical

The colour plates are the most problematic part of the book. The technical quality of the photographs is low, probably because photo-scanning was used. The photographs vary from very dark to extremely pale and some are blurred (e.g., Nos 79, 95, 288, 455, 491 etc.). What is incomprehensible, are the many mistakes in the legends of the photographs, which are summarized in the table below. All the photographs of the genus *Labi-*

Photo No.	Legend in book	Corrected legend	Photo No.	Legend in book	Corrected legend
21	<i>Zeugophora scutellaris</i>	<i>Zeugophora turneri</i>	97	<i>Labidostomis taxicornis</i>	<i>Labidostomis bolivari</i>
22	<i>Zeugophora turneri</i>	<i>Zeugophora scutellaris</i>	98	<i>Labidostomis testaceipes</i>	<i>Labidostomis andreinii</i>
45	<i>Liliocerus merdigera</i>	<i>Liliocerus scapularis</i>	99	<i>Labidostomis ghilianii</i>	<i>Labidostomis guerini</i>
51	<i>Oulema atosuturalis</i>	<i>Oulema gallaeciana</i>	454	<i>Aphilenia hauseri</i>	?
52	<i>Oulema gallaeciana</i>	<i>Oulema atosuturalis</i>	455	<i>Aphilenia ornata</i>	?
80	<i>Labidostomis andreinii</i>	<i>Labidostomis ghilianii</i>	456	<i>Atomyria sarafschanica</i>	? <i>Colaspina saportae</i>
81	<i>Labidostomis bolivari</i>	<i>Labidostomis testaceipes</i>	457	<i>Callipta oberthuri</i>	<i>Colaspina grandis</i>
82	<i>Labidostomis centromaculata</i>	<i>Labidostomis pallidipennis</i>	458	<i>Callipta fausti</i>	<i>Demotina fasciculata</i>
83	<i>Labidostomis embergeri</i>	<i>Labidostomis kantneri</i>	459	<i>Colaspidea grossa</i>	<i>Demotina elegans</i>
84	<i>Labidostomis guerini</i>	<i>Labidostomis laeta</i>	573	<i>Chrysolina sahlbergiana</i>	<i>Chrysolina sahlbergi</i>
85	<i>Labidostomis hordei</i>	<i>Labidostomis maculipennis</i>	617	<i>Gonioctena decaspilota</i>	<i>Gonioctena (Spartoxena) sp.</i>
86	<i>Labidostomis nevadensis</i>	<i>Labidostomis elegans</i>	648	<i>Phola octodecimguttata</i>	<i>Phaedon cochleariae</i>
87	<i>Labidostomis kantneri</i>	<i>Labidostomis longimana</i>	649	<i>Phaedon cochleariae</i>	<i>Phola octodecimguttata</i>
88	<i>Labidostomis elegans</i>	<i>Labidostomis propinqua</i>	663	<i>Timarcha rugulosa</i>	<i>Timarcha latipes</i>
89	<i>Labidostomis longimana</i>	<i>Labidostomis quadrinotata</i>	665	<i>Timarcha tenebricosa</i>	<i>Timarcha rugulosa</i>
90	<i>Labidostomis laeta</i>	<i>Labidostomis mairei</i>	666	<i>Timarcha latipes</i>	<i>Timarcha tenebricosa</i>
91	<i>Labidostomis mairei</i>	<i>Labidostomis rubripennis</i>	667	<i>Apophyllia viridipennis</i>	<i>Apophyllia flavovirens</i>
92	<i>Labidostomis quadrinotata</i>	<i>Labidostomis taxicornis</i>	788	legend missing	<i>Argopus clarki</i>
93	<i>Labidostomis maculipennis</i>	<i>Labidostomis centromaculata</i>	898	<i>Sphaeroderma separatum</i>	<i>Sphaeroderma unicolor</i>
94	<i>Labidostomis pallidipennis</i>	<i>Labidostomis hordei</i>	899	<i>Zipangia obscura</i>	<i>Trachyapthona obscura</i>
95	<i>Labidostomis propinqua</i>	<i>Labidostomis nevadensis</i>	915	<i>Hypocassida subferruginea</i>	<i>Glyphocassis spilota</i>
96	<i>Labidostomis rubripennis</i>	<i>Labidostomis embergeri</i>	916	<i>Glyphocassis spilota</i>	<i>Hypocassida subferruginea</i>

dostomis (80–99) are completely mismatched, some are duplicated but with a different legend (456 and 460; 457 and 461; 458 and 463; 459 and 464) and some pairs have confusing legends, etc. In summary, the species indicated in the legends of at least 44 of the 918 photographs (almost 5%) are incorrect.

I am somewhat embarrassed by both of the volumes of this book. The identification keys are well written and the two volumes are easy to use and will be indispensable for all Chrysomelid and other specialists. Such a crucial publication, however, should have been much better. In particular, the quality of the colour photographs and the many errors in their legends is very unsatisfactory. It is also a great pity that both volumes were not corrected or reviewed by specialists of the different subfamilies. Such reviews would have resulted in the deletion of some of the errors and inclusion of some more species. Finally, I have to recommend to all users of the keys that they compare the resultant determinations with those obtained using recent taxonomic literature, in particular the sixth volume of the catalogue of Palaearctic beetles (Löbl & Smetana, 2010), in order to verify the current names and validity of the species.

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