

BOOK REVIEW

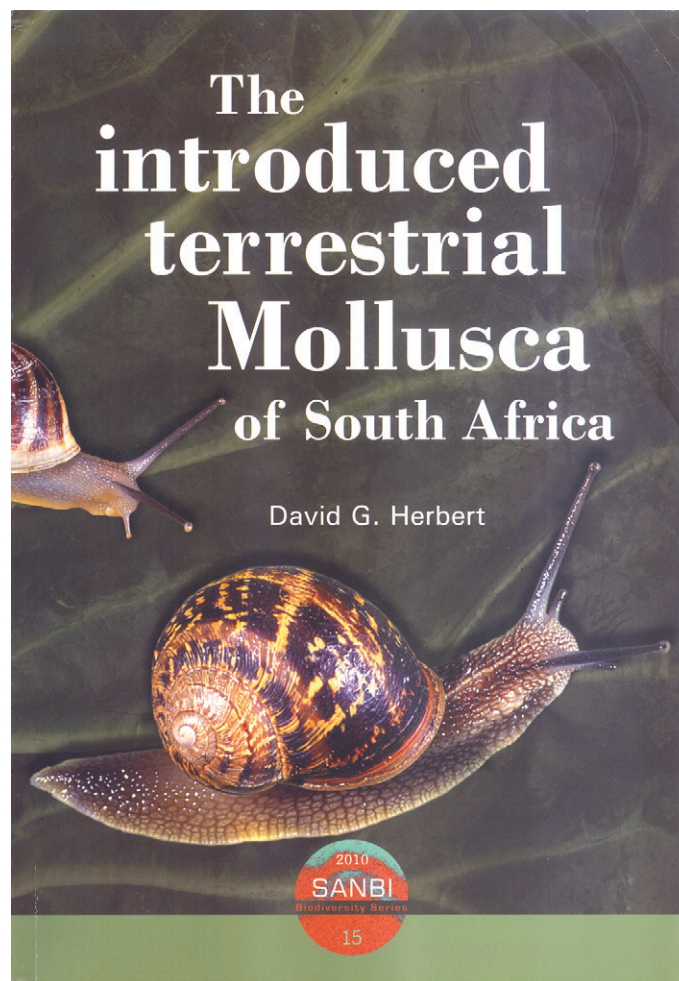
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HERBERT, DAVID G., 2010. The introduced terrestrial Mollusca of South Africa, SANBI Biodiversity Series 15, South African National Biodiversity Institute, Pretoria (bookshop@sanbi.org.za): 1-108, 51 figs (mostly in colour), 36 maps, 29.6 × 21 cm. ISBN 978-1-919976-56-3. Paperback, price SAR 100 or US\$ 25. Also refer to the online bookshop http://www.sanbi.org/index.php?option=com_virtuemart&Itemid=203&Redirected=1.

Some time ago a colleague (specialist in African land snails) showed me a series of photos to which I replied “a new species of *Trachycystis*, I presume”, because at that time I was ensconced behind the binocular microscope, also working on African snails. In fact, the photos depicted the European species *Zonitoides excavatus* and thereby beautifully demonstrated the quandary of someone working on imported snail species. This is also illustrated by Herbert’s remarks on p. 15 of the book under scrutiny.

“In this regard it is pertinent to note that a number of unidentified terrestrial gastropod taxa have been collected in disturbed or transformed habitats in South Africa (material in the Natal Museum). These taxa belong to the families Succineidae, Subulinidae and Vertiginidae and appear not to be referable to any of the indigenous species described to date nor to any of the currently known alien species. It seems likely that when studied in more detail these will prove to be of allochthonous origin, rather than being undescribed species. An additional caveat that needs to be considered in connection with the identification of alien species, particularly those belonging to genera with many closely similar species, is the tendency to assume that newly collected samples must belong to one of the species already recorded as an alien in South Africa. This of course is not justified, and highlights the importance of on-going vigilance and careful scrutiny of all samples belonging to such genera



with reference to the relevant taxonomic literature on a broad scale.”

Herbert’s attractively produced book draws attention to a somewhat neglected problem, i.e. that of alien gastropods in South Africa. Increased global trade and tourism have supplied travel opportunities for a variety of land snails and obviously South Africa has had to accept its fair share of these aliens. Thriving ‘exotic’ land gastropods may cause a host of problems for agriculture and kindred types of commercial ventures but, equally important, may also damage local biodiversity by replacing endemics. The problem in South African is not new – the

first white settlers in the 17th century already imported plants in the form of seedlings, cuttings, etc. The wine trade is now of great economic importance for South Africa, but may well have been at the root of some problems with alien fauna.

Initially alien land snails were only mildly problematic. When I started a modest research project in the early sixties of last century little was known and the problems caused seemed to be of a limited nature (Van Bruggen, 1964). On the other hand, at that time the Zoology Department of the university in Pietermaritzburg already used *Cornu aspersum* rather than local achatinid taxa in a practical course on invertebrate anatomy because of the abundant availability of the former. Dr Dai Herbert has now tackled the introduced land gastropods in a big way early in the new century and his results are, to put it mildly, disturbing. It appears that there are 34 species of which 28 have established self-sustaining populations, sometimes of a considerable magnitude. Most aliens originate from Europe of which 9 are Mediterranean species. The main pest species are *Cornu aspersum* and *Theba pisana*.

All species are illustrated by colour photos and there are also drawings of genitalia of slugs; in addition, distribution in South Africa is shown in 36 maps. An usual photograph is that of a living scalariform individual of *Cornu aspersum* on p. 6. The 'mucus trails' on the covers are a clever innovation, modest, but highly appreciated by the specialist. Many species familiar in Europe are described and attention is given to doubtful species such as in the genus *Cochlicopa* and in the family Arionidae. All species are treated in great detail in keeping with the status of the book as a manual of alien snails. The book is concluded with 25 pp. of references (many of which are of a local nature), which indicates how much interest these problem snails have generated in South Africa.

Under 'Potential future introductions' a number of taxa are featured, i.e. *Cochlicella acuta* (*C. barbara* is treated among the es-

tablished species), *Cerņuella virgata*, *Microxeromagna lowei*, *Sarasinula plebeia* (slug), certain Subulinidae and Succineidae. Somehow or other the intertropical pest species *Achatina fulica* has not become established, which (pp. 27-28) "indicates that there is an environmental or biological barrier of some kind in natural habitats that prevents this." Incidentally, the southern limits of the original range of this species are somewhere south of the mouth of the Zambezi River, which implies that it naturally does occur not all that far away from the borders of South Africa. Control measures have been applied here and there but there are only two cases where this has resulted in eradication (*Otala punctata* and *Rumina decollata* in Cape Town, late 1980s and early 1990s).

Among the 'Excluded species' there are cases of misidentifications, mislabelling, or widely distributed taxa naturally extending into southern Africa.

South African species as pests elsewhere hardly do play a role. The United States quarantine authorities have intercepted a few endemics among cut flowers, etc. Also, some predators have been introduced elsewhere for biological control without any noticeable impact at all.

All in all, this is a comprehensive treatise on an assemblage of pest species of great importance for agriculture, silviculture, horticulture and viticulture in South Africa. Herbert's book is exemplary for alien snail studies and should generate new interest elsewhere in the world in order to keep these problems manageable – after all, there is the nefarious example of *Achatina fulica* in SE. Asia, the Pacific, and South America, where it has gone very wrong indeed.

REFERENCE

- BRUGGEN, A.C. VAN, 1964. The distribution of introduced mollusc species in southern Africa. – *Beaufortia* 11: 161-169.