


Short communication

First record of *Chinavia acuta* (Dallas, 1851) (Heteroptera: Pentatomidae) in Cape Verde

GRZEGORZ GIERLASIŃSKI^{1*}, DAVID A. RIDER²

¹ Natural History Collections, Faculty of Biology, Adam Mickiewicz University, Uniwersytetu Poznańskiego 6, 61-614 Poznań, Poland

² North Dakota State University, Department of Entomology, Dept. 7650 P.O. Box 6050, Fargo ND, 58108, USA

*corresponding author: ggierlas@gmail.com

Abstract. This paper presents the first record of *Chinavia acuta* in the Cape Verde archipelago.

Key words: Hemiptera, true bugs, stink bug, faunistics, distribution, new records.

Cape Verde is an island country in the central Atlantic Ocean. The archipelago is situated about 650 kilometres west of Senegal. The climate of Cape Verde is characterized by particularly low rainfall but relatively high humidity (Chevalier 1935; Schmutterer et al. 1978). Together with the Azores, Canary Islands, Madeira, and the Savage Islands, Cape Verde forms part of the Macaronesia ecoregion (Lindberg 1958).

The first information about true bugs occurring in Cape Verde appeared in the work of Bergroth (1893), who listed eight species collected on these islands that were deposited in a museum in Lisbon. He also noted that the hemipteran fauna of Cape Verde was completely unknown. A much broader study, presenting a list of over 150 heteropteran species from this archipelago, was carried out half a century later (Lindberg 1958). It is worth mentioning that Lindberg's work was preceded by studies on the archipelago's flora (Chevalier 1935).

In the second half of the twentieth century, information about true bugs from Cape Verde also appeared in several papers. For example, Wagner (1957) described a new species (*Aethus lindbergi*), Schmutterer et al. (1978) discussed a native crop pest affected by drought, while Grimm and Führer (1998) monitored phytophagous bugs feeding on *Jatropha curcas* L. The final list of animals and plants found on the Cape Verde archipelago was published fifteen years ago (Báez et al. 2005).

The genus *Chinavia* Orian was established in 1965 to include nine species from the Afrotropical region, but since then its taxonomic status has been confused. Linnavouri (1972) placed *Chinavia* as a synonym of *Acrosternum*, then later (1982) he elevated it to subgenus status. This was followed by Rolston (1983) in

his studies of the New World species. More recently, Schwertner (2005) treated *Chinavia* as a full, valid genus, which has been followed in the subsequent papers (e.g. Grazia et al. 2006; Genevicius & Schwertner 2014; Genevicius et al. 2017; Servino & Schwertner 2020) again.

Chinavia represents a very common group of green stink bugs, medium in size, which are distributed in the Afrotropical, Nearctic and Neotropical regions. Polyphagous in habit, they have been recorded on host plants of more than 30 families (Grazia et al. 2006). Some species are pests of important crops, e.g. *Chinavia acuta* (Dallas, 1851) in tropical Africa (Couilloud 1989; Egonyu et al. 2005).

Chinavia acuta is a completely green species. Each humeral angle of the pronotum is produced into a prominent spine. It feeds on various cultivated plants and weeds (Servino & Schwertner 2020). When breeding, the milky white eggs are laid primarily on the upper sides of leaves in small clusters of up to 50. The larvae are black from the moment of hatching and remain grouped on the empty eggshells. During their development, the colouring of the larvae is highly variable and can differ from that of adults (Poutouli et al. 2011).

A few other similar species of *Chinavia* are often found on cultivated plants, but only one more African species has the spinose humeral angles: *Chinavia dispar* (Schouteden, 1960). However, they are easily distinguished, because the humeral spines in *C. dispar* have a yellow colour, while in *C. acuta*, red (Fig. 1) (Servino & Schwertner 2020).

One adult male of *C. acuta* was caught on January 16, 2020, on the island of Sal. This is the first record of this species on the islands of Cape Verde.



Fig. 1. *Chinavia acuta*: male collected on Sal island (photo by G. Gierlasiński).

Material examined

Cape Verde: 1 adult male (Fig. 1), 16.01.2020, Sal island, Santa Maria (gps: 16.600111, -22.908969), leg. D. Kojder, det. G. Gierlasiński, ver. D.A. Rider.

Acknowledgement

The authors would like to thank Dariusz Kojder for providing the specimen and the detailed record information, and Peter Senn for his help in language correction.

References

- Báez M., Heiss E., Garcõa A., Cabrera A. 2005. Hemiptera: Heteroptera, pp. 71–78. [in:] Arechavaleta M., Zurita N., Marrero M.C. & Martõn J.L. (eds). *Lista preliminar de especies silvestres de Cabo Verde (hongos, plantas y animales terrestres)*. Consejería de Medio Ambiente y Ordenación Territorial, Gobierno de Canarias, 155 pp.
- Bergroth J. 1893. Notes sur quelques Hémiptères éthiopiens du Musée de Lisbonne. *Jornal de Ciencias Mathematicas, Physicas e Naturaes* **2**: 122–127.
- Chevalier A. 1935. Les Iles du Cap Vert. Flore de l'Archipel. *Journal d'agriculture traditionnelle et de botanique appliquée* **170-171**: 733–1090.
- Couilloud R. 1989. Hétero-ptères déprédateurs du cotonnier en Afrique et à Madagascar (Pyrrhocoridae, Pentatomidae, Coreidae, Alydidae, Rhopalidae, Lygaeidae). *Coton et Fibres Tropicales* **44**: 185–227.

- Egonyu J. P., Kyamanywa S., Anyanga W., Ssekabembe C.K. 2005. Review of pests and diseases of sesame in Uganda. *African Crop Science Conference Proceedings* **7**: 1411–1416.
- Genevcus B. C., Caetano D. S., Schwertner C. F. 2017. Rapid differentiation and asynchronous coevolution of male and female genitalia in stink bugs. *Journal of evolutionary biology* **30**: 461–473.
- Genevcus B. C., Schwertner C. F. 2014. Review and phylogeny of the geniculata group, genus *Chinavia* (Heteroptera: Pentatomidae), with notes on biogeography and morphological evolution. *Zootaxa* **3847**: 33–56.
- Grazia J., Schwertner C. F., Ferrari A. 2006. Description of five new species of *Chinavia* Orian (Hemiptera, Pentatomidae, Pentatominae) from western and northwestern South America. *Denisia* **19**: 423–434.
- Grimm C., Führer E. 1998. Population dynamics of true bugs (Heteroptera) in physic nut (*Jatropha curcas*) plantations in Nicaragua. *Journal of Applied Entomology* **122**: 515–521.
- Lindberg H. 1958. Hemiptera Insularum Caboverdensium. Systematik, Ökologie und Verbreitung der Heteropteren und Cicadinen der Kapverdischen Inseln. *Societas Scientiarum Fennica, Commentationes Biologicae* **19**: 5–246.
- Linnavuori R. E. 1972. Hemiptera Heteroptera of the Sudan with remarks on some species of the adjacent countries. Part 5. Pentatomidae. *Boletim da Sociedade Portuguesa de Ciências Naturais* **(2)15**: 5–128.
- Linnavuori R. E. 1982. Pentatomidae and Acanthosomatidae (Heteroptera) of Nigeria and the Ivory Coast, with remarks on species of the adjacent countries in West and Central Africa. *Acta Zoologica Fennica* **163**: 1–176.
- Poutouli W., Silvie P., Aberlenc H.-P. 2011. *Hétéroptères phytophages et prédateurs d'Afrique de l'Ouest*. Éditions Quae. 80 pp.
- Rolston L. H. 1983. A revision of the genus *Acrosternum* Fieber, subgenus *Chinavia* Orian, in the Western Hemisphere (Hemiptera: Pentatomidae). *Journal of the New York Entomological Society* **91**: 97–176.
- Schmutterer H., Pires A., Klein Koch C. 1978. Zur Schädlingsfauna der Kapverdischen Inseln. *Zeitschrift für Angewandte Entomologie* **86**: 320–336.
- Schwertner C. F. 2005. Filogenia e classificação dos percevejos-verdes do grupo *Nezara* Amyot & Serville (Hemiptera, Pentatomidae, Pentatominae).

D.Sc. Thesis, Universidade Federal do Rio Grande do Sul, Porto Alegre: XV + 1–246.

Servino L.M., Schwertner C. F. 2020. Electronic identification key and data base to the genus *Chinavia* (Heteroptera: Pentatomidae) with morphological and distributional data. *Zootaxa* **4809**: 195–196.

Wagner E. 1957. *Aethus lindbergi* nov. spec., eine neue Cydniden-Art von den Kap Verde-Inseln (Hemipt. Heteropt.). *Commentationes Biologicae* **16**(11): 1–5.



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Received: 1 October 2020
Accepted: 14 December 2020