



Short Communication

Incidence of *Rutherfordia major* (Cockerell, 1894) (Hemiptera, Diaspididae) on lovi-lovi *Flacourtie inermis* Roxb. (Salicaceae) in Kerala

K.D. Prathapan*

College of Agriculture, Kerala Agricultural University, Thiruvananthapuram 695 522, Kerala, India

Received 05 March 2022; received in revised form 05 June 2022; accepted 06 June 2022

Abstract

Rutherfordia major (Cockerell, 1894) (Hemiptera, Diaspididae) has been reported as a pest of lovi-lovi, *Flacourtie inermis* Roxb. (Salicaceae), for the first time in India from Kerala.

Keywords: Armored scale, India, Pest.

Rutherfordia major (Cockerell, 1894) (Hemiptera, Diaspididae), is a polyphagous armored scale distributed in 27 countries in Africa, Asia, Europe, North and South America, with a host range of 37 plant species in 27 genera under 15 plant families (Morales et al., 2016). This was originally described in *Chionaspis* Signoret, 1868 from Antigua in South America on 'Heliotrope sp.' (sic) by Cockerell in 1894 (Cockerell, 1894). The only record of *R. major* in India is that of Takagi et al. (1989), who reported it on *Vateria indica* L. (Dipterocarpaceae) at Periyar Tiger Reserve on 19 December 1978. *Rutherfordia major* is commonly called large snow-scale or lychee bark scale.

Lovi-lovi, *Flacourtie inermis* Roxb. (Salicaceae), native to the Philippines and Indonesia, is a small tree cultivated in homesteads for its ripe fruits which are eaten raw or pickled or processed into jam, wine or preserves (Lim, 2013).

A massive infestation of *R. major* was observed on 5 February 2022 at Alappuzha ($N 9^{\circ} 29' 46.667''$ $E 76^{\circ} 19' 29.464''$) on an eight year old plant. The

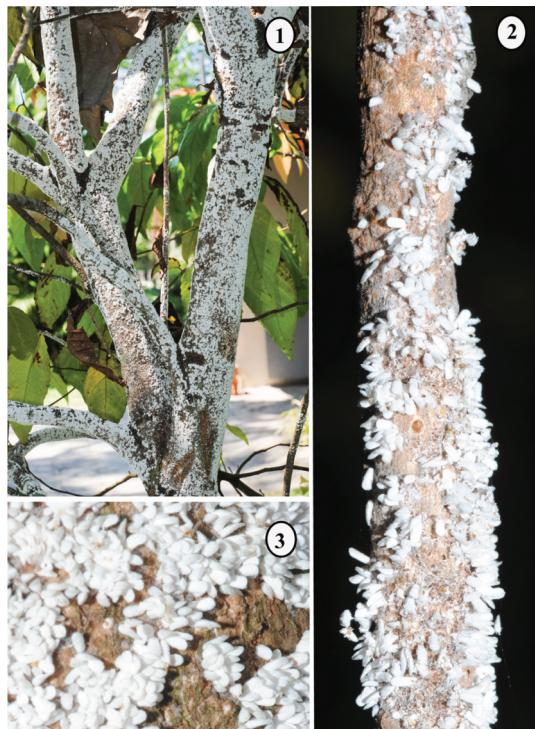
plant was nearly covered with scales on the whole of main stem (Figs 1, 3) and a few pencil thick branches (Fig. 2). The infested plant was completely debilitated and showed signs of wilting and yellowing of leaves. The white fluffy covering of scales on the main stem could be seen from a distance (Fig. 1). The infestation was brought under control by the farmer, who sprayed soap solution followed by dimethoate 0.5% next day.

Rutherfordia major was reported on *F. inermis* in Florida, USA (Butcher, 1959). This is the first report of *R. major* on *F. inermis* in India. Voucher specimens of the scale are deposited in the Indian Council of Agricultural Research - National Bureau of Agricultural Insect Resources (NBAIR), Bengaluru (Accession nos NBAIR/HEM/DIA/RUTHER/110222-1 and NBAIR/HEM/DIA/RUTHER/110222-2).

Acknowledgements

Sunil Joshi, ICAR-National Bureau of Agricultural Insect Resources identified *R. major*. I am indebted to Ambika Devi, former faculty member of the

*Author for Correspondences: Phone: 9446053297, Email: prathapan.kd@kau.in



Figures 1 – 3. Infestation of *Rutherfordia major* on *Flacourtie inermis*. 1. Main stem covered with scales, 2. infestation on a pencil thick branch, 3. close-up of infestation on main stem

Kerala Agricultural University, for bringing the scale incidence to my notice.

References

- Butcher, F.G. 1959. A preliminary report on armored scale insects in Dade County. Proceedings of the Florida State Horticultural Society, 71(1958): 362–364.
- Cockerell, T.D.A. 1894. Notes on some scale insects of the sub-family Diaspinae. Canadian Entomologist, 26: 127-132.
- Lim, T.K. 2013. *Flacourtie inermis*. In: Edible medicinal and non-medicinal plants. Springer, Dordrecht. pp. 767–770; https://doi.org/10.1007/978-94-007-5653-3_39.
- Morales, G.M, Denno, B.D, Miller, D.R., Miller, G.L., Ben-Dov, Y. and Hardy, N.B. 2016. ScaleNet: A literature-based model of scale insect biology and systematics. Database. doi: 10.1093/database/bav118. <http://scalenet.info>. (Accessed on 1 March 2022).
- Takagi, S., Pong, T.Y. and Khoo, S.G. 1989. Beginning with *Diaulacaspis* (Homoptera: Coccoidea: Diaspididae): Convergence or effect? Insecta Matsumurana (New Series), 42: 143-199.