



## RESEARCH NOTE

### New host plant records of *Apogonia rauca* (Fabricius) (Coleoptera: Scarabaeidae: Melolonthinae) in Kerala, India

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**ABSTRACT:** *Apogonia rauca* (Fabricius, 1801), a widely distributed scarab beetle, utilizes 16 host plants belonging to 10 families. *Litchi chinensis*, *Bergera koenigii*, *Syzygium malaccense*, and *Brownea coccinea* documented as new adult food plants for *A. rauca*.

**Keywords:** *Bergera koenigii*, *Brownea coccinea*, Host Plant, *Litchi chinensis*, *Syzygium malaccense*

The genus *Apogonia* Kirby, 1819 (Coleoptera: Scarabaeidae: Melolonthinae: Diplotaxini) comprises more than 530 species distributed across the tropical and subtropical regions of Asia and Africa (Bezdek, 2025). This genus is known for nocturnal adult feeding on the foliage of a wide variety of plants, causing defoliation and economic loss in agricultural and forest plantations, with the grub inhabiting soil and feeding on roots (Kapadia *et al.*, 2006).

*Apogonia rauca* (Fabricius, 1801) is a well-documented, economically important species, known for its wide distribution across Asia (CABI, 2019). Adults resemble *A. ferruginea* (Fabricius) in general morphology but can be readily distinguished by differences in size and coloration. They are relatively large and robust, measuring 7–8 mm in length, and exhibit a shining dark brown coloration. This species is distinctly polyphagous, with a broad adult host range. Among the reported host plants, only *Arachis hypogaea* L. is considered as primary host, with significant yield losses attributed to infestation of roots by grubs (Nath and Singh, 1987; Kapadia *et al.*, 2010).

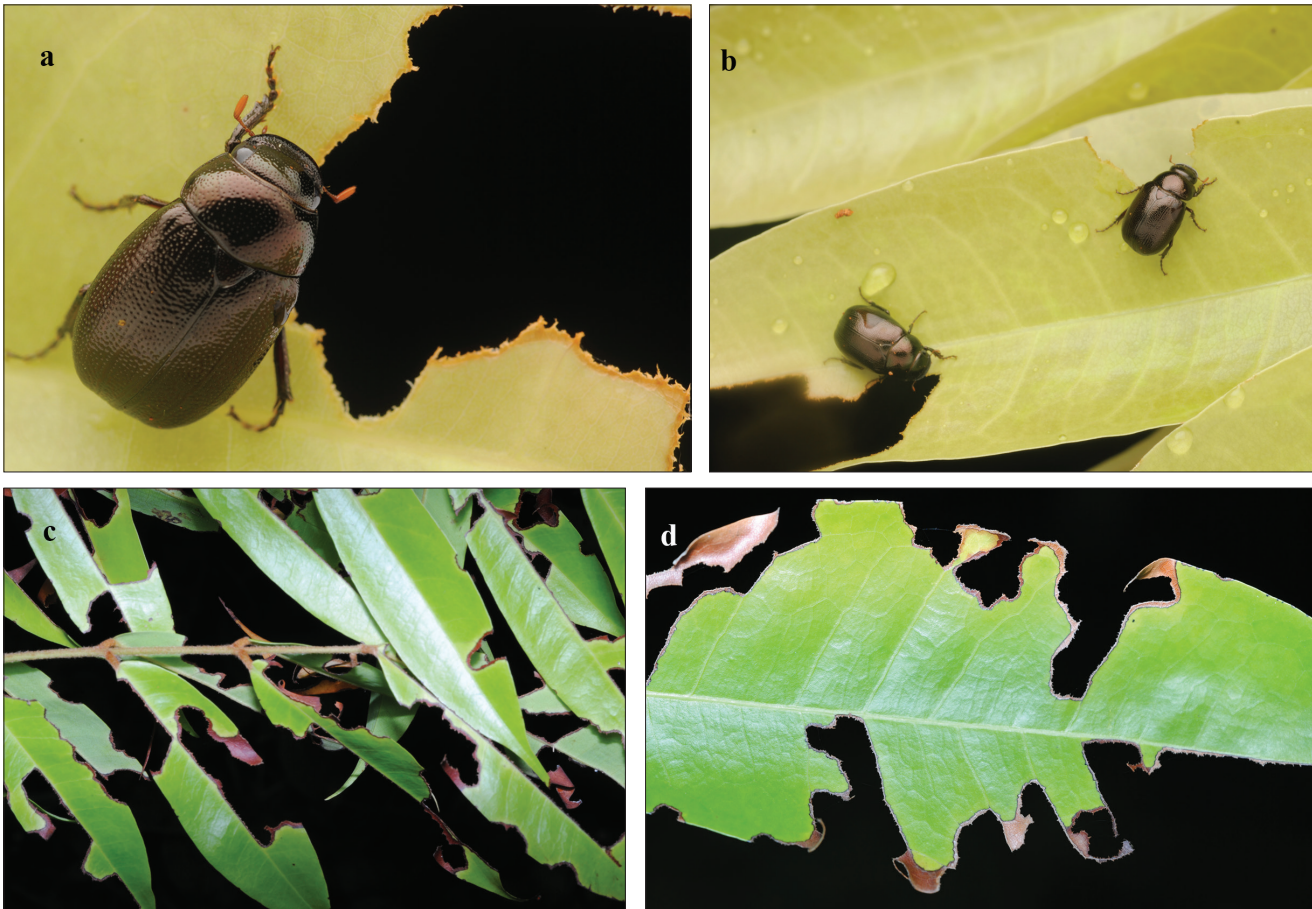
Adults of *A. rauca* is known to feed on 15 host plants belonging to 10 families (Table 1), while the only known larval host plant is *Arachis hypogaea*. *Apogonia rauca* adults were observed feeding on curry leaf (*Bergera koenigii* (L.) Spreng., Rutaceae), *Syzygium malaccense* (L.) Merr. & L.M. Perry (Myrtaceae) and *Brownea coccinea* Jacq. (Fabaceae)

at Vellayani, Kerala and on litchi (*Litchi chinensis* Sonn., Sapindaceae) at Wayanad, Kerala, India during May – July, 2023. Severe infestation was recorded on *B. coccinea* (Fabaceae), where approximately 70 adults were observed aggregating on a single plant of about 170 cm height during May 2023. The adult population persisted throughout the months of May and June 2023, indicating a prolonged adult activity. The infestation on *B. coccinea* was conspicuous even from a distance during day, suggesting an exceptionally high density of infestation. Adults fed predominantly on tender leaves, with nearly all foliage on the infested plant showing skeletonization (Fig. 1. a & b). Beetles were also collected on litchi (*Litchi chinensis*) in May and on curry leaf (*Bergera koenigii*) in July 2023. On all host species, adults initiated feeding characteristically from the lateral leaf margin, progressively extending towards the midrib (Fig. 1. c & d), a feeding pattern consistent with that of other beetles such as *Melolontha* spp. and the chinese rose beetle (*Adoretus sinicus* Burmeister) (Jayaram, 1997). Voucher specimens of *A. rauca* (Accession no. NIM/NBAIR/COL/SCA-1(1)/072023 to NIM/NBAIR/COL/SCA-1(25)/072023) are deposited in the ICAR – National Bureau of Agriculturally Important Insect Resources, Bengaluru (ICAR–NBAIR).

Sapindaceae and Rutaceae are new host plant families for *A. rauca*. This is also the first report of the species on *L. chinensis*, *B. koenigii*, *S. malaccense* and *B. coccinea* in India.

**Table 1: Host plants of *Apogonia rauca* along with new records from Kerala**

| Family        | Scientific name                                      | Common name | Locality            | Reference                                                                 |
|---------------|------------------------------------------------------|-------------|---------------------|---------------------------------------------------------------------------|
| Euphorbiaceae | <i>Acalypha</i> sp.                                  | Acalypha    | India (Karnataka)   | Jayaram, 1997                                                             |
|               |                                                      |             | India               | Nath and Singh, 1980                                                      |
|               | <i>Acacia</i> sp.                                    | Acacia sp.  | India (Gujarat)     | Kapadia <i>et al.</i> , 2006                                              |
| Fabaceae      |                                                      |             | Asia                | CABI, 2019                                                                |
|               | <i>Arachis hypogaea</i>                              | Groundnut   | India               | Nath and Singh, 1980; Kapadia <i>et al.</i> , 2010                        |
|               | <i>Brownea coccinea</i>                              | Brownea     | India (Kerala)      | Present study                                                             |
|               | <i>Leucaena leucocephala</i> (Lam.) de Wit           | Subabul     | India               | Pawar, 1986                                                               |
|               | <i>Tamarindus indica</i> L.                          | Tamarind    | India (Karnataka)   | Jayaram, 1997                                                             |
|               | <i>Vachellia nilotica</i> (L.) P.J.H. Hurter & Mabb. | Babul       | India               | Nath and Singh, 1980; Kapadia <i>et al.</i> , 2010                        |
|               | <i>Cinnamomum verum</i> J. Presl                     | Cinnamon    | India (Karnataka)   | Jayaram, 1997                                                             |
| Lauraceae     | <i>Persea americana</i> Mill.                        | Avocado     | India (Karnataka)   | Jayaram, 1997                                                             |
|               |                                                      |             | India               | Nath and Singh, 1980; Kapadia <i>et al.</i> , 2010                        |
| Meliaceae     | <i>Azadirachta indica</i> A.Juss.                    | Neem        | India (Gujarat)     | Kapadia <i>et al.</i> , 2006                                              |
| Myrtaceae     | <i>Psidium guajava</i> L.                            | Guava       | India (Karnataka)   | Jayaram, 1997                                                             |
|               | <i>Syzygium malaccense</i>                           | Eugenia     | India (Kerala)      | Present study                                                             |
| Poaceae       | <i>Saccharum officinarum</i> L.                      | Sugarcane   | India               | Nath and Singh, 1980;                                                     |
| Rhamnaceae    | <i>Ziziphus mauritiana</i> Lam.                      | Ber         | India               | Nath and Singh, 1980; Kapadia <i>et al.</i> , 2010                        |
|               |                                                      |             | India (Gujarat)     | Kapadia <i>et al.</i> , 2006                                              |
|               |                                                      |             | Sri Lanka           | Hutson, 1924                                                              |
|               |                                                      |             | India and Sri Lanka | Veeresh <i>et al.</i> , 1995                                              |
| Rosaceae      | <i>Rosa</i> spp.                                     | Rose        | India               | Nath and Singh, 1980; Patil and Veeresh 1984; Kumar <i>et al.</i> , 2006, |
|               |                                                      |             | India (Karnataka)   | Jayaram, 1997;                                                            |
|               | <i>Coffea arabica</i> L.                             | Coffee      | Indochina           | Du pusuvier, 1932;                                                        |
| Rubiaceae     | <i>Ixora</i> sp.                                     | Ixora       | India (Karnataka)   | Jayaram, 1997                                                             |
|               |                                                      |             | India (Kerala)      | Present study                                                             |
| Rutaceae      | <i>Berberis koenigii</i>                             | Curry leaf  | India (Kerala)      | Present study                                                             |
| Sapindaceae   | <i>Litchi chinensis</i>                              | Litchi      | India (Kerala)      | Present study                                                             |
| Theaceae      | <i>Camellia sinensis</i> (L.) Kuntze                 | Tea         | Indochina           | Du pusuvier, 1932;                                                        |



**Fig. 1.** Adults of *Apogonia rauca* feeding on *Brownea coccinea* (a,b); Damage of *Apogonia rauca* on *Brownea coccinea* (c,d)

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## CONFLICT OF INTEREST

Author has no conflict of interest to express

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