



Braconid species complex (Hymenoptera: Braconidae) associated with plant galls from India

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INTRODUCTION

- ✓ Braconidae is one of the largest families of parasitic wasps under Hymenoptera and are most widely known for their effective utilisation in biological control.
- ✓ Majority of braconids are solitary or gregarious (endo and ecto) parasitoids.
- ✓ Braconid wasps associated with galls exhibit phytophagous, predatory or sequential behavior (predatory and later phytophagous) and their larvae have characteristic sclerotized mandibles (Flore *et al.*, 2005; Ranjith *et al.*, 2022).

METHODOLOGY

- ✓ Survey: Random opportunistic sampling during 2022-2024.
- ✓ Location: Pan India.
- ✓ Hosts collected: Galls on leaves & tree branches.
- ✓ Rearing & Curation: National Insect Museum (NIM), ICAR-NBAIR, Bengaluru, Karnataka,

RESULTS

- ✓ A total of 10 morphospecies of Braconinae and two Cheloninae were recorded from 5 plant genera *viz.* *Ficus*, *Terminalia*, *Garuga*, *Cinnamomum*, *Carissa*.
- ✓ **Significant observations:**
 - ❑ **FIRST RECORD:** Braconids reared from *Ficus racemosa* L. leaf galls (induced by psyllids) exhibit ‘predatory-phytophagous’ behaviour (in Karnataka).

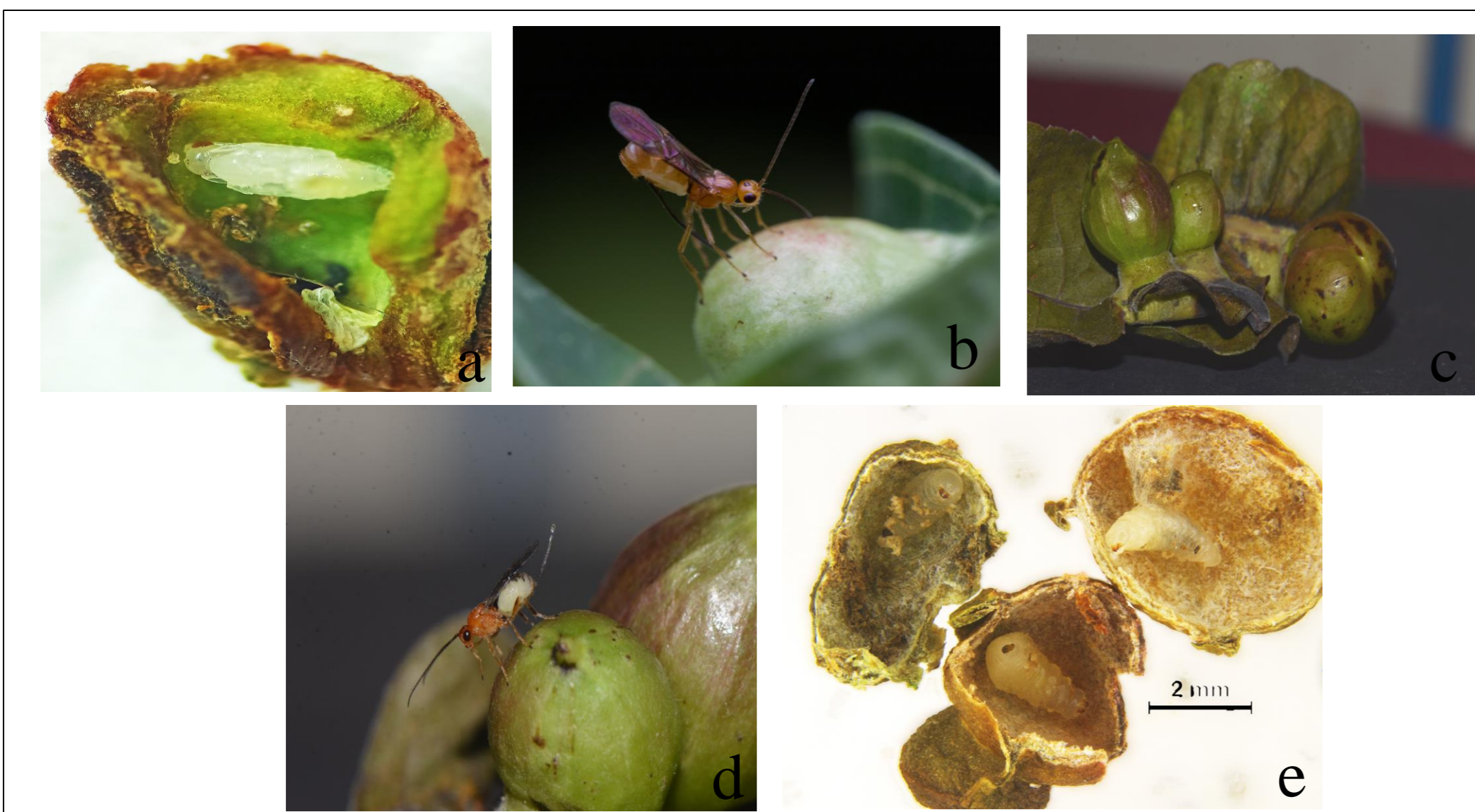


Fig. 1: *Ficus racemosa* gall (a. cocoon; b. oviposition), *Garuga pinnata* (c. leaf galls; d. oviposition), e. Leaf galls on *Carissa spinarum* L. with bracon larvae.

- ❑ *Bracon garugaphagae* Ranjith & Quicke, 2016 was recorded from psyllid leaf galls of *Garuga pinnata* Roxb. exhibiting ‘predatory-phytophagous’ behaviour (in Tamil Nadu).

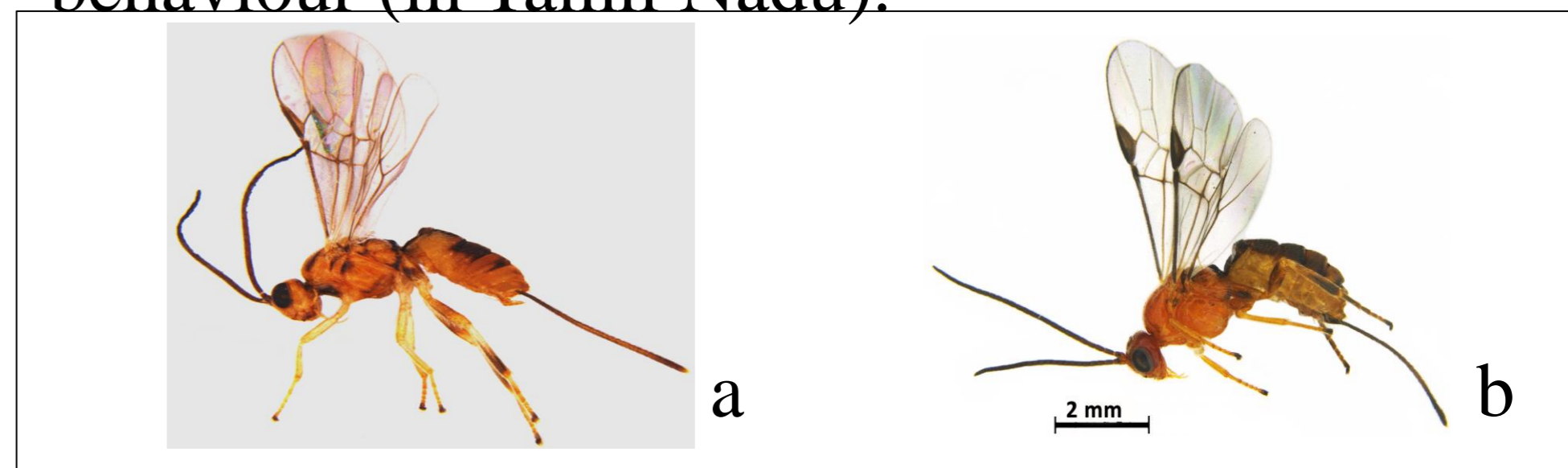


Fig. 2: a. *Bracon* sp.1, b. *Bracon* sp. 2

- ❑ *Bracon predatorius* Ranjith & Quicke, 2022 was reared from mite galls on *Cinnamomum* sp. showing complete ‘predatory’ behaviour (first record from Meghalaya, north-east India).
- ❑ *Carissa spinarum* leaf galls yielded braconids (in Karnataka) but complete biology remains unknown.
- ❑ *Phanerotoma* sp. and *Chelonus* sp. were reared from leaf galls of *G. pinnata* (in Tamil Nadu) and stem galls of *Terminalia* sp. (in Karnataka), respectively.

CONCLUSION/ FUTURE PROSPECTS

- ✓ Braconids associated with galls, most of the times, showed predatory or sequential behavior.
- ✓ Discovery of such biological associations will aid in interesting phylogenetic/evolutionary studies.

ACKNOWLEDGEMENT

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