

SN 4 Supplementary Material for LOKESHWARI, D., M. HAYAT, N. K. KRISHNA KUMAR, H. MANJUNATHA AND R. VENUGOPALAN– **First Occurrence of the Aphid Parasitoid, *Aphelinus basilicus* (Hymenoptera: Aphelinidae), on *Aphis gossypii* (Hemiptera: Aphididae) Color Forms at Karnataka, India.** Florida Entomologist 97(2) (June 2014) at <http://purl.fcla.edu/fcla/entomologist/browse>

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SUMMARY

An aphid parasitoid, *Aphelinus basilicus* Fatima & Hayat (Aphelinidae: Aphelininae) is described from material collected in Bengaluru, Karnataka for the first time. It was found to parasitize apterous viviparous females of the cotton aphid, *Aphis gossypii* (Glover) infesting *Gossypium hirsutum* (Malvaceae) cultivated in the experimental plot maintained at the Indian Institute of Horticultural Research, Bengaluru, during Jul, 2013. Field data indicated that the parasitoid, *Aphelinus basilicus* parasitized dark green forms (88%) of *A. gossypii* more frequently than pale green (24%) and yellow forms (2%) suggesting that the body color strongly influenced the host preference for foraging. The 3 color forms were differentially susceptible to selection by the parasitoid. Statistical analysis revealed that the parasitoid had an inherent preference for dark green forms ($P < 0.05$). Information on the parasitoid's distribution, diagnostic characters, host range and host preference are presented to ease the identification as well as to understand the fundamentals of host selection behavior of this species. This is a new distributional record of *Aphelinus basilicus* parasitizing color forms of *A. gossypii* associated with *G. hirsutum* in Karnataka.

Key Words: biological control, color forms, *Gossypium hirsutum*, SAS

RESUMEN

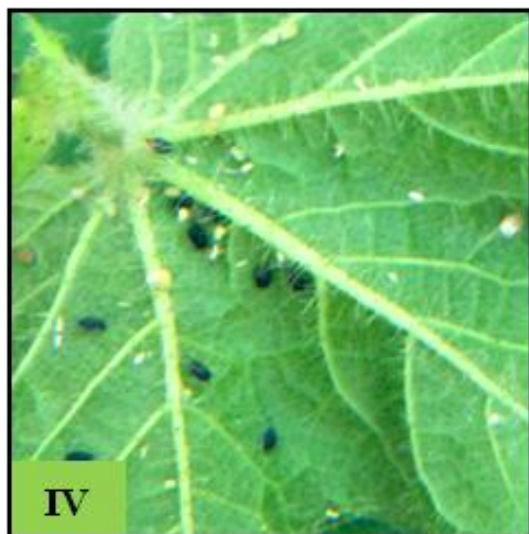
Se describe el parasitoide de áfidos, *Aphelinus basilicus* Fátima y Hayat (Aphelinidae: Aphelininae) de material recolectado por primera vez en Bangalore, Karnataka. Se encontró que las hembras parasitan la forma áptera vivípara de los áfidos del algodón, *Aphis gossypii* (Glover) infestando *Gossypium hirsutum* (Malvaceae) cultivado en la parcela experimental mantenida en el Instituto de Investigaciones Hortícolas de India, Bengaluru, durante julio del 2013. Los datos de campo indican que el parasitoide, *Aphelinus basilicus* parasitó a las formas de color verde

oscuro (88%) de *A. gossypii* con más frecuencia que el verde pálido (24 %) y las formas de color amarillo (2%) que indica que el color influyó fuertemente la preferencia de hospedero en la búsqueda de alimento. Las 3 formas de color fueron diferencialmente susceptibles a la selección por parte del parasitoide. El análisis estadístico reveló que el parasitoide tenía una preferencia inherente a las formas de color verde oscuro ($P < 0.05$). Se presenta información sobre la distribución del parasitoide, caracteres diagnósticos, rango de huéspedes y la preferencia de hospedero para facilitar la identificación, así como para comprender los fundamentos del comportamiento de selección del hospedero de esta especie. Este es un nuevo registro de distribución de *Aphelinus basilicus* que parasita diferentes tonos de color de *A. gossypii* asociado con *G. hirsutum* en Karnataka.

Palabras Clave: control biológico, formas de color, *Gossypium hirsutum*, SAS

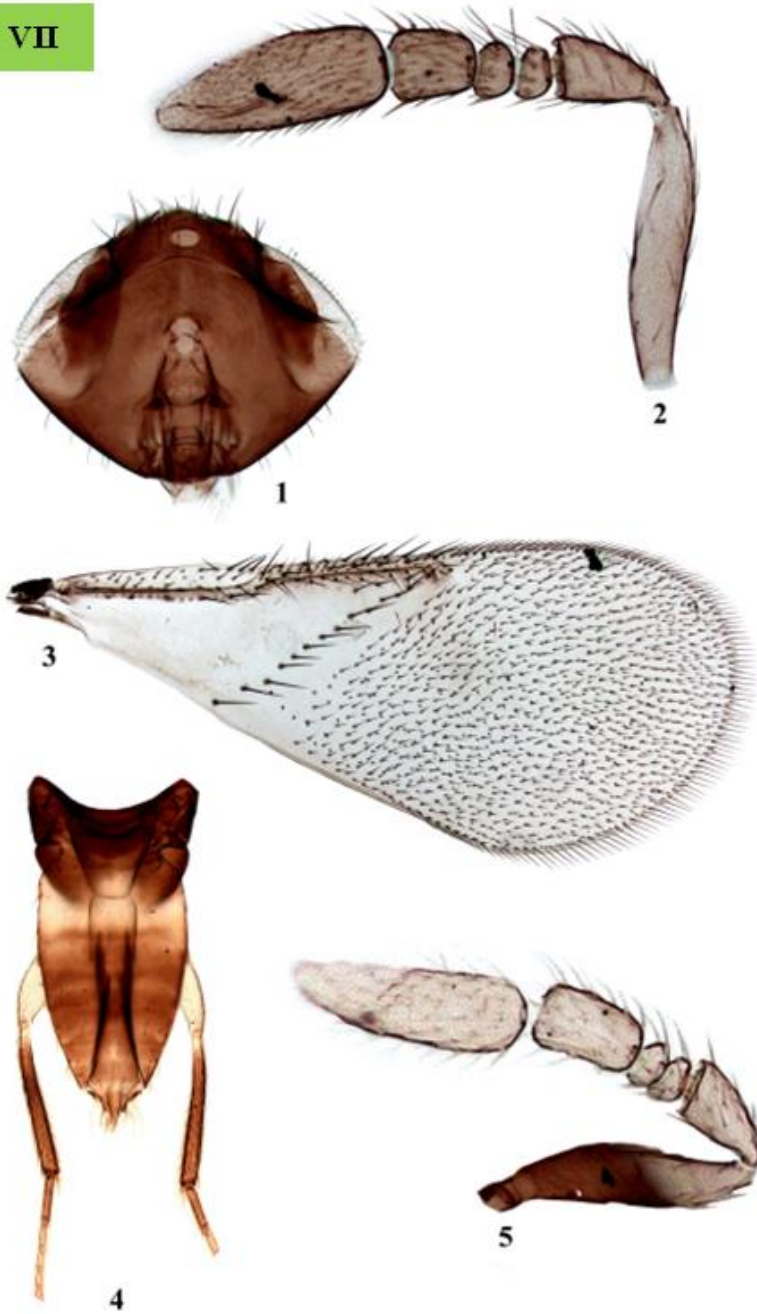


Suppl. Plates I-III. Color forms of *Aphis gossypii* Glover; dark green, pale green and yellow forms.



Suppl. Plates IV-VI. Parasitized *Aphis gossypii* Glover on cotton; mummified aphid; mummy with an emergence hole.

VII



Figures 1- 5. *Aphelinus basilicus* Fatima & Hayat, female except figure 5: 1, head frontal; 2, antenna; 3, fore wing; 4, propodeum and metasoma; 5, male antenna.

Suppl. Plate VII. Diagnostic characters of *Aphelinus basilicus* Fatima & Hayat. Figs. 1-4.

Female. 1, head, frontal view, 2, antennae, 3, fore wing, 4, propodeum and mesonota; 5, male antenna.