

# Factsheet *Ceratitis colae* Silvestri

**Original name:** *Ceratitis colae* Silvestri, 1913: 63.

**Vernacular name:** none

## **Formal redescription** (after De Meyer & Freidberg, 2006)

Body length: 4.95 (4.30-5.50) mm; wing length: 5.19 (4.25-5.90) mm.

### Male

Head: Antenna yellowish orange to orange. First flagellomere with dorsal margin sometimes brown; 2-3 times as long as pedicel. Arista with moderately long rays; ventral rays shorter and sparser than dorsal rays, especially basally. Frons convex or flat; yellow to orange; with short scattered setulae distinctly darker than frons. Frontal setae well developed. Face yellow; gena brown, partly continued along ventral margin of face but not in median part; mouthparts with apex partly darkened but not completely black (as in *lepida*). Genal seta and setulae dark, well developed.

Thorax: Postpronotal lobe white, without spot. Mesonotum: ground color dark gray with silvery shine; with streaks and darker markings but without distinct spots or clearly defined stripes, except prescutellar yellow markings, which are separate. Scapular setae dark. Scutellum white, basally without spots, apically with three separate black spots, extending to half-way. Anepisternum on ventral half brownish black; setulae on ventral half black, ventral to anepisternal seta with longer black setulae.

Legs: Yellow except where otherwise noted; setation typical for subgenus, mainly dark. Foreleg: coxa brown, occasionally almost black; femur anteriorly with contrasting black/white pattern, basally pale yellow; white spot turns silvery when viewed from certain angle, anteroventrally with bush of short dark setulae in median half; posteriorly slightly darkened along dorsal and ventral margin; with dispersed and poorly developed bush of long dark setulae along entire length, posterodorsal setulae longer; ventral setae dark; tibia anteriorly slightly darkened. Midleg: femur anteriorly yellow to yellowish brown; anteroventrally with conspicuous silvery patch, distally with inconspicuous one; ventrally with dark feathering along entire length except for interruption (6-7 setae wide) in median part; tibia broadened; yellow, silvery shine when viewed from certain angle; with black feathering dorsally along distal 0.8 and ventrally along distal 0.66, anteriorly with dispersed short setulae, in front of dorsal row forming an irregular second one. Hindleg: femur at apical 0.25 with longer setulae dorsally and ventrally.

Wing: Bands brown or yellowish brown. Interruption between marginal and discal bands near vein  $R_1$  clear and complete; cubital band free; medial band absent; crossvein R-M proximal to middle of discal cell. Apex of vein  $R_1$  distal to level of crossvein R-M. Crossvein DM-Cu oblique anterobasally, or straight.

Abdomen: Mostly yellow. Tergite 1 with small brown patches at posterior margin. Tergites 2 and 4 with silvery transverse band along posterior half. Tergite 3 with brown transverse band along posterior 0.33, sometimes interrupted in middle. Tergite 5 with yellowish brown patches along anterior part and weak silvery band posteriorly. Sometimes abdomen with general darker brown appearance. Setation and banding typical for subgenus. Male epandrium in lateral view with posterior lobe of lateral surstylus elongate, apical end curved.

### Female

As male except for the following characters: Legs without feathering; yellow, femora darker; forefemur posteroventrally with dark pilosity. Wing usually with darker banding. Abdominal tergite 5 with distinct

silvery band posteriorly. Oviscape almost as long as preabdomen. Aculeus at least eight times longer than wide; tip with distinct apical indentation and lateral margin slightly sinuous.

Encyclopedia of Life link: <http://eol.org/pages/724256/overview>

## DNA barcoding

Multiple reference DNA barcodes from the species distribution are available on the Barcode of Life Data Systems (BOLD) at:

[http://www.boldsystems.org/index.php/Taxbrowser\\_Taxonpage?taxon=Ceratitidis+colae&searchTax=](http://www.boldsystems.org/index.php/Taxbrowser_Taxonpage?taxon=Ceratitidis+colae&searchTax=)

In BOLD (March 2017), *C. colae* only forms monospecific BINs. For this reason, DNA barcoding might be considered as a suitable tool for the molecular identification of this species.

## Host plant list

This is a stenophagous species, found mainly on species of the genus *Cola*, including those commercially grown for their Kola nuts. Records from other hosts need confirmation. Throughout its range it is recorded from the hosts listed in the table below.

PlantFamily	PlantLatinName	PlantCommonNameEnglish
Apocynaceae	Tabernaemontana sp.	
Sterculiaceae	Cola acuminata	abata cola
Sterculiaceae	Cola nitida	
Sterculiaceae	Cola sp.	

Additional information on host records and associated specimens can be found on :

<http://projects.bebif.be/fruitfly/taxoninfo.html?id=57>

## Impact & management

Details on losses incurred by *Ceratitidis colae* on hosts are very limited. Silvestri (1913) mentions up to 60% of *Cola acuminata* fruits being infested in a single locality (Aburi, Ghana). The damage caused on this host is further discussed by Owusu-Manu & Bonku (1987) according to White & Elson-Harris (1994).

Management for this species is, as for most fruit fly pests, most efficient using an IPM (Integrated Pest Management) program, including aspects such as orchard sanitation, bait sprays, mass trapping among others. General reviews on the current IPM components applied in Africa can be found in chapters 13 to 20 of Ekesi et al. (2016).

No SIT (Sterile Insect Technique) application specifically for this species has been developed in Africa.

## Attractants & trapping

Both sexes can be attracted by protein bait products such as liquid protein baits and three-component Biolure.

There are a few records of male specimens captured with trimedlure but the exact attractiveness of this lure needs to be established.

General information on trapping, types of traps, lures and required density of trapping stations can be found in IAEA (2013), Shelly et al. (2014), and Manrakhan (2016).

## Distribution

*Ceratitis colae* is mainly found in the humid regions of western Africa from Guinée Conakry till Cameroon. It is also reported from the DR Congo. Not established outside mainland Africa.

Distribution map for Africa, based upon specimen records with georeferences is available at:

<http://projects.bebif.be/fruitfly/taxoninfo.html?id=57>

## REFERENCES

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This factsheet is compiled within the framework of two network projects: The “ERAfrica\_NI\_027 Fruit Fly” project and the networking project “BL/37/FWI 08 FRUITFLY” funded by the Belgian Science Policy. Data are provided by collaborators of the following institutions: Centre de coopération internationale en recherche agronomique pour le Développement (CIRAD, La Réunion, France); Citrus Research International (CRI, Nelspruit, South Africa); Royal Museum for Central Africa (Tervuren, Belgium); Sokoine University of Agriculture (SUA, Morogoro, Tanzania), Stellenbosch University (SU, Stellenbosch, South Africa) and Universidade Eduardo Mondlane (EMU, Maputo, Mozambique).

