# Taxonomic Notes of the Species of Genus Opogona in Korea (Lepidoptera, Tineidae, Hieroxestinae)

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## Abstract

The genus Opogona was described by Zeller in 1853. Opogona was included in the Lyonetiadae by Flecher (1929), and then it was transfered to the Tineidae by David (1978). Opogona nipponica and O. thiadelpha, are recorded by Park(1983) for the first time from Korea. After that, O. sacchari is discovered at greenhouse nursery growing an ornamental plant all over the country in 1998, and is identified by K. T. Park (CIS) and Smithsonian David (Smithsonian Institution, America) at request of RDA (Rural Development Administration). Therefore genus Opogona are recognized from Korea as follows: Opogona nipponica, O. thiadelpha, O. sacchari, and Opogona thiadelpha. They are very similar to each other, except on O. nipponica for the color of vertex on head. But it is not correct to distinguish these species by existing key. In the present study, two species are redescribed with adults and genitalia of both sexes. After we draw up new keys to distinguish these similar two species, O. nipponica, and O. thiadelpha. And some illustrations of adults, venations, male and female genitalia are provided.

## 1. Systematic position of genus Opogona

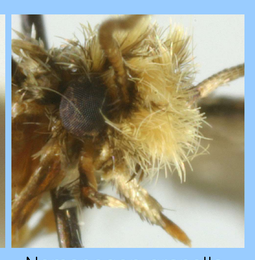
Checklist of the family Tineidae in the Korean peninsula.

Order Lepidoptera 나비목
Family Tineidae, Latreille, 1810 곡식좀나방과
Subfamily Hieroxestinae 고운머리좀나방아과
Genus Opogona Herrich-Sch ffer, 1853
Opogona nipponica Stringer, 1930 두무늬좀나방
Opogona thiadelpha Meyrick, 1934 노랑머리좀나방
Opogona sacchari (Bojer, 1856) 바나나좀나방

## 2. External characters of genus Opogona

▣ Key to the genera


Opogona thiadelpha


Nemapogon granella

1. Scales of vertex appressed to head, broad, lamellate ……..….2

   Scales of vertex erect, piliform ……..tineid species except Opogona, Wegneria

2. Apical half of the forewing dark or pale brown mark, the other half yellow ..... ……..….… Opogona

   Forewing with a single yellow mark mostly ..... Wegneria

Opogona species have broad, shiny appressed scales on the head which is distinctly triangular in lateral view and has a very pronounced `brow-ridge.

▣ Adult

▶ Wingspan 11-14.5mm in both sexes


Opogona nipponica Str.


Opogona thiadelpha Mey.

◀ Wingspan 10-12 mm in both sexes

Key to the species of the genus Opogona Zeller, 1853

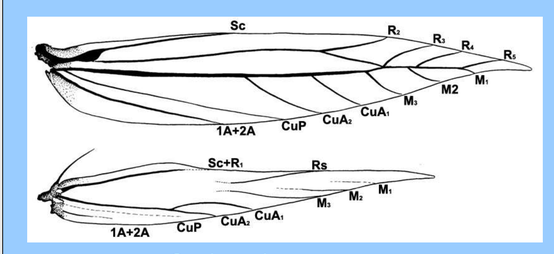
1. Forewing divided into color of yellow and purple-brown…….……..2

   Forewing unicolored light-brown with two or three brownish spots……..….O. sacchari

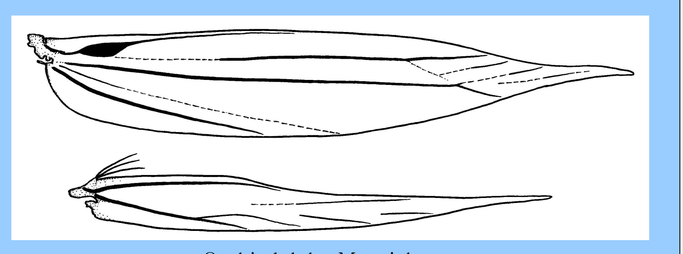
2. Forewing with blackish-brown spot on base of costa…….O. thiadelpha

   Forewing without blackish-brown spot on base of costa…….….……..O. nipponica

▣ Venation



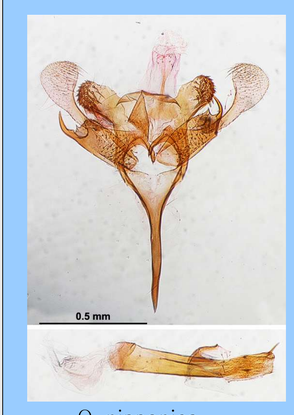
O. nipponica Stringer


O. thiadelpha Meyrick

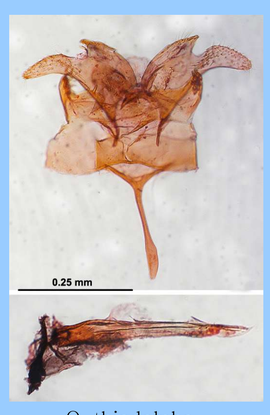
1. Opogona has a lacking forewing vein R1.
2. Forewing with $M_3$, $CuA_1$, $CuA_2$, but thiadelpha is not; in thiadelpha, discal cell more elongate and narrow than nipponica.

## 4. Genitalia characters of Genus Morophaga

▣ Male genitalia



O. nipponica



O. thiadelpha

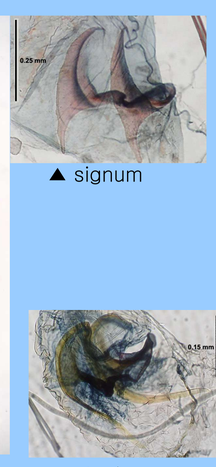
Key to the species of Genus Opogona based on the male genitalic characters

- Valva with rounded apex, with sclerotized hook projection; saccus with rounded apex …...Opogona thiadelpha

- Valva with bilobed apex; saccus with pointed apex ……..….….……..Opogona nipponica

▣ Female genitalia

O. nipponica



▲ signum

O. thiadelpha

Key to the species of Genus Opogona based on the female genitalic characters

- Ductus bursae broad, short; Corpus bursae with a pair of bobsled-shaped signum ..... Opogona nipponica

- Ductus bursae slender, elongate, thin-walled; Corpus bursae with a pair of large `F' shaped signum .……..…….Opogona thiadelpha

## 5. Introduced insect pest in family Tineidae

O. sacchari is discovered for the first time in 1998 in Korea. This species is identified by K.T. Park (CIS) and Smithsonian David (Smithsonian Institution, America) at request of RDA (Rural Development Administration). At that time, this species had developed around the country. Larval feeds on banana, Dracaena and so on. Now dried specimen was not anywhere, but several photograph of larva and pupal case taken at that time. Though specimen is not founded, maybe this species will be distribute in Korea. No specimens examined in this study.

O. ormoscopa is not confirmed by systematic method and have to need more examination

## 6. Ecology

Opogona and its allies are detritus-feeders, typically feeding on plant remains but occasionally attacking living plants (Davis, 1978: 10; Zimmerman, 1978: 387-396).

| species | Host & Biological notes |
|---|---|
| Opogona nipponica | Larva: dead tree of family Tiliaceae. Adult appears in mountain more than in plain in Japan. |
| Opogona thiadelpha | adult appears in plain more than in mountain in Japan |
| Opogona sacchari | Wide host-range(banana, pineapple, bamboo, maize, sugarcane) |

## 7. Remarks

O. thiadelpha has been written in thiadelta, but that is mis-spelling. Therefore species name of this species is changed from thiadelta to thiadelpha, original designation by Meyrick.

Opogona sacchari, O. ormoscopa are only discovered greenhouse as introduced insect pest and not discovered in natural condition.

Opogona two species are collected in similar ratio in Japan, but this species is common species than O. thiadelpha in Korea. And vertex of O. nipponica is yellowish or blackish brown and thiadelpha is blackish dark brown. This species is identified by comparing with male and female genitalia figure of Kuroko (1964) and slide preparation (♂, ♀).

## 8. References

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