CAPS Datasheets provide pest-specific information to support planning and completing early detection surveys.

# Conogethes punctiferalis species complex

### **Scientific Name**

Conogethes punctiferalis (Guenée, 1854)

#### Synonyms:

Astura punctiferalis, Guenée, 1854
Botys nicippealis Walker, 1859
Deiopeia detracta Walker, 1859
Astura guttatalis Walker, 1866
Conogethes punctiferalis jocata T.P.
Lucas, 1892
Dichocrocis punctiferalis, Hampson, 1896

#### **Common Name**

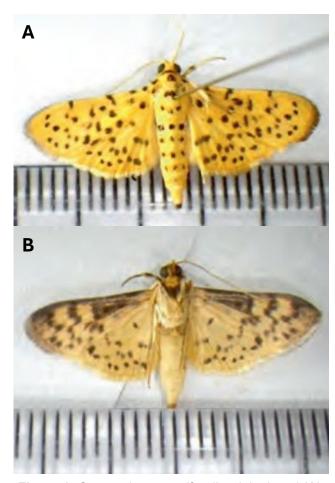
Castor capsule borer, castor seed caterpillar, corn moth, durian fruit borer, maize moth, peach pyralid moth, Queensland bollworm, shoot borer, smaller maize borer, **yellow peach moth** 

# **Type of Pest**

Moth, borer

### **Taxonomic Position**

Class: Insecta, Order: Lepidoptera, Family: Crambidae (Nuss et al., 2003-2025) Subfamily: Spilomelinae (Mally et al., 2019)Tribe: Margaroniini (Mally et al., 2019)



**Figure 1.** Conogethes punctiferalis adult, dorsal **(A)** and ventral **(B)** views. Photos from Loc et al. 2018.

### Notes on taxonomy and nomenclature:

Conogethes punctiferalis is a species complex, with an unknown number of cryptic species (Mally, 2018). Species within the Conogethes punctiferalis complex are difficult to identify due to similar external morphology and overlapping host ranges (Armstrong, 2010; Chaovalit et al., 2019; Shashank et al., 2018). Multiple closely related species have been described (Inoue and Yamanaka, 2006; Shashank et al., 2018), but there has been no recent comprehensive taxonomic revision of the genus to separate the species within the complex further (Chaovalit et al., 2019; Mally, 2018; Robinson et al., 1994).

To account for any uncertainty regarding the identity of moths mentioned in the literature, this datasheet will cover the complex as a whole and includes information from any reference that uses the scientific name *Conogethes punctiferalis*. Emphasis has been placed on the polyphagous form that feeds on fruits from several plant families.

## **Pest Recognition**

This section describes characteristics of the organism and symptoms that will help surveyors recognize possible infestations/infections in the field, select survey sites, and collect symptomatic material. For morphological descriptions, see the Identification/Diagnostic resources on the AMPS pest page on the CAPS Resource and Collaboration website.

## **Pest Description**

<u>Adults:</u> Adults are straw yellow to brownish yellow, with numerous small black to reddish spots and a wingspan of <sup>3</sup>/<sub>4</sub> to 1 inch (Fig. 1 & 2) (Chong et al., 1991; Kumar et al., 2020). Female moths are often larger and males have a tuft of black hairs at the tip (Fig. 3) (Kumar et al., 2020).



**Figure 2.** Forewing closeup of *Conogethes punctiferalis*. Photo from Pest and Diseases Image Library, Bugwood.org, CC BY-NC 3.0 US.

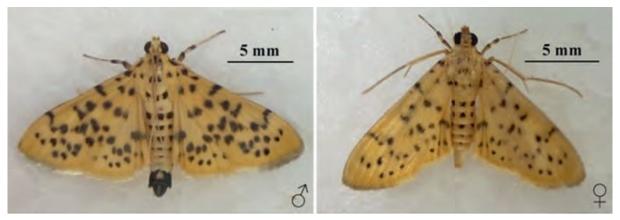


Figure 3: Male and female *C. punctiferalis*. Photo from Du et al., 2018.

Eggs: Round or oval shaped and very small (0.63 × 0.41 mm). When freshly laid, eggs are white to light yellow in color, turning pinkish or dark brown before hatching. Eggs are typically laid on or near fruit (Kumar and Kalkal, 2022; Kumar et al., 2020; Luo and Honda, 2015).

<u>Larvae:</u> Yellow peach moth larvae are found in fruits and are light green to brown with dark brown head capsule and mouth parts, though coloration varies by food source (Chong et al., 1991; Kumar et al., 2020). Fully grown larvae are <sup>1</sup>/<sub>2</sub> to 1 inch (Devasahayan and Abdulla Koya, 2005). Larvae have highly visible pinacula, or small, flattened, hardened black areas with short bristly hairs (Kumar et al., 2020; Loc et al., 2018).

<u>Pupae:</u> Pupae range in size from  $^{1}/_{4}$  - $^{1}/_{2}$  in. (Chong et al., 1991; Du et al., 2018; Kumar et al., 2020) and are reddish, orange or brown in color (Du et al., 2018; Kumar et al., 2020). The pupa is enclosed by a white silken cocoon (Jeong et al., 2021).

## **Signs & Symptoms**

Larvae of the yellow peach moth cause extensive damage by creating holes in stems, shoots, buds, fruits, and seeds and depositing dark brown frass on plant tissues. As larvae feed, they bore into fruits, pods, and stalks, leading to yellowing of the fruit, fruit drying or fruit drop, or other damage that predisposes the plant to secondary pathogens (Chong et al., 1991; Loc et al., 2018). Additionally, larvae produce webbing that further degrades affected plants (Púcat, 1995).

# **Easily Mistaken Species**

This genus is not found in the United States.

Multiple, yellow-colored moths within the subfamily Spilomelinae are present in North America and could be confused with *C. punctiferalis*:

Polygrammodes flavidalis and P. oxydalis (found in eastern U.S.) are similar in color but have indistinct dashes rather than dark wing spots (Royals et al., 2017).

*Polygrammodes elevata* (found in southern Florida) has similar wing spots, but the spots are generally smaller and purple in color (Royals et al., 2017).

Phaedropsis stictigramma (found in central to southern Florida) males have dark scales on abdominal segment 8, but lack black spotting on the abdominal segments and the wings are deeper yellow, more sparsely spotted, and have a black outer margin (Royals et al., 2017).

Asturodes fimbriauralis (Guenée) (present in southern Florida) are generally similar, but are darker yellow with darker brown wing spots, and a shiny silver line on the outer margin (Hayden, 2017; Solis et al., 2020).

Similar species not found in the United States are Conogethes pinicolalis, C. parvipunctalis, C. pluto. C. evaxalis, C. haemactalis, C. sahyadriensis, and C. tenuialalis, all of which are only identifiable by genitalic characteristics (Chaovalit et al., 2019; Mally, 2018).

# **Commonly Encountered Non-targets**

The CAPS-approved survey method for this species is a large plastic delta trap and *Conogethes punctiferalis* lure combination. *Maruca vitrata* and *Omphisa anastomosalis* are also attracted to the major component of the *C. punctiferalis* lure (McQuate et al., 2019; Schläger et al., 2015).

Insects or organisms attracted to white, red, or orange delta traps may also be captured or commonly encountered in trapping surveys.

# **Biology and Ecology**

After mating, females lay small, oval eggs on or near fruit or seeds of hosts (Jeong et al., 2021). Females lay between 20 to 30 eggs, singularly, in their lifetime (Biosecurity New Zealand, 2007). Once they hatch, larvae feed on or in stems, shoots, buds, fruits, and seeds (Jeong et al., 2021). The larvae go through five instars (Devasahayan and Abdulla Koya, 2005). Pupation usually occurs in the larval tunnels within a silk cocoon, surrounded by shelters of webbing and frass (Biosecurity New Zealand, 2007; Chong et al., 1991). The adult emerges about 8 days later (Chong et al., 1991).

Both hosts and environmental conditions affect lifecycle duration (Kumar et al., 2017). Under laboratory conditions, this species completes its lifecycle in about 24 days in cocoa (Alagar et al., 2013), 28 days in castor bean, 31 days in cardamom, and 32 days in apple and ginger (Kadoi and Kaneda, 1990; Stanley et al., 2009). Damage caused by this species increased when relative humidity was increased (Kumar et al., 2017; Stanley et al., 2009). Two to five generations per year have been observed with two to three generations in Korea and four to five generations in China and India (Jeong et al., 2021; Shashank et al., 2015).

A literature review of the bioecology can be found in Shashank et al. (2015) and Jeong et al. (2021).

#### **Known Hosts**

This species is highly polyphagous and has been recorded on 65 hosts from 30 different plant families, many of which are economically important (Devasahayan and Abdulla Koya, 2005). Castor bean, cardamom, guava, durian, and turmeric are among the preferred hosts in Asia and Australia but are not widely cultivated in the United States (Gour and Sriramulu, 1992; Li et al., 2015).

The host list below includes cultivated and wild plants that 1) are infected or infested by the pest under natural conditions, 2) are frequently described as major, primary, or preferred hosts, and 3) have primary evidence for feeding and damage documented in the literature. Plants are highlighted in bold if they are commercially produced and the pest causes economically significant damage (Table 1).

**Table 1.** Preferred hosts of *Conogethes punctiferalis* found in the US<sup>1</sup>.

Scientific Name	Common Name	Type/Use	Reference
Castanea crenata	Japanese chestnut	Cultivated	Kim et al., 2024
Curcuma longa L. <sup>2</sup>	turmeric	Cultivated	Kumar et al., 2018
Dimocarpus longan (=Euphoria longana)	longan	Cultivated	Loc et al., 2018
Citrus spp.	Citrus (lemon, orange)	Cultivated	Li et al. 2015
Gossypium spp.	cotton	Cultivated	Loc et al., 2018
Helianthus annuus	sunflower	Cultivated	Wang et al., 2014
Malus spp.	apple	Cultivated	Wang et al., 2014
Prunus domestica	plum	Cultivated	Gour and Sriramulu, 1992
Prunus persica	peach	Cultivated	Kondo et al., 2008
Psidium guajava L.	guava	Cultivated	Devi et al., 2021; Kumar et al., 2022
Ricinus communis	castor bean	Cultivated	Kumar et al., 2017
Solanum melongena	eggplant	Cultivated	Li et al. 2015
Sorghum bicolor	sorghum	Cultivated	Stanley et al., 2009
Theobroma cacao	cocoa	Cultivated	Alagar et al., 2013
Vitis vinifera	grape	Cultivated	Gour and Sriramulu, 1992
Zea mays	corn	Cultivated	Li et al. 2015
Zingiber officinale <sup>2</sup>	ginger	Cultivated	Kumar et al., 2018

<sup>&</sup>lt;sup>1</sup>The recently (Luo and Honda, 2015) described species, *Conogethes pinicolalis*, was originally referred to as the Pinaceae-feeding type (PFT) of *C. punctiferalis* (Wang et al., 2014). As such, references to Pinaceae host plants for *C. punctiferalis* were excluded from the host list.

<sup>&</sup>lt;sup>2</sup>There is uncertainty regarding ginger as a host of *C. punctiferalis* due to the other highly similar and closely related species that feed on Zingerberaceae, *C. evaxalis*, *C.* 

pluto and *C. sahyadriensis* (Chaovalit et al., 2019; Mally, 2018; Shashank et al., 2018). Reports of ginger as a host may be misidentifying these superficially indistinguishable species as *C. punctiferalis*.

## **Pest Importance**

Conogethes punctiferalis is known to attack commercially important tropical fruits, vegetables, and spices in Asia and Australia (Chakravarthy, 2018; Ganesha et al., 2013; Jeong et al., 2021; Kumar et al., 2017). Most reports describing the amount and type of damage caused by this species are limited to a specific host crop in a specific region (Chakravarthy, 2018; Korycinska, 2012). For example, *C. punctiferalis* is considered a serious pest of ginger in India, peaches in China, and causes complete crop loss of sorghum in Australia (Devasahayan and Abdulla Koya, 2005; Stanley et al., 2009). Devasahayan and Abdulla Koya (2005) report that in ginger, *C. punctiferalis* has caused yield losses of 25-40% in certain parts of India.

Conogethes punctiferalis is recommended for regulation as a quarantine pest by the European and Mediterranean Plant Protection Organization (EPPO, 2024) and as a harmful organism in Brazil, Canada, Chile, Colombia, Costa Rica, Ecuador, Guatemala, Mexico, Morocco, Panama, Peru, South Africa, and Uruguay (USDA-PCIT, 2024).

## **Pathogens or Associated Organisms Vectored**

This species is not known to vector any pathogens or associated organisms; however, boring by this species can predispose the fruits to secondary pathogens (Chong et al., 1991).

### **Known Distribution**

This species is found in southern and eastern Asia, Europe, and Oceania (Table 2).

**Table 2.** Countries where *C. punctiferalis* is known to occur.

Region/Continent	Country	Reference
Asia	Bangladesh	Husain et al., 1987
Asia	Bhutan	Irungbam et al., 2016
Asia	China	Wan et al., 2016
Asia	India	Chettri, 2022
Asia	Indonesia	Sutrisno, 2007
Asia	Japan	Aoshima et al., 2020
Asia	Korea	Alagar, 2018
Asia	Malaysia	Shashank et al., 2018
Asia	Myanmar	Inoue et al., 2006
Asia	Nepal	Inoue et al., 2006
Asia	Pakistan	Shashank et al., 2015, Chaovilit et al., 2019
Asia	Philippines	Waterhouse, 1993
Asia	Sri Lanka	Shashank et al., 2015, Gour and Sriramulu, 1992
Asia	Taiwan	Devi et al., 2021
Asia	Thailand	Shashank et al., 2015, Chaovilit et al., 2019

Asia	Vietnam	Inoue et al., 2006
Europe	UK, England	Truscott, 2007
Oceania	Australia	Astridge, 2001
Oceania	Papua New Guinea	Inoue et al., 2006

## **Pathway**

This species can move through international trade. There are records of this species being intercepted on fruit imports to England, Wales, the Netherlands, and New Zealand (Biosecurity New Zealand, 2007; Korycinska, 2012). Interceptions in England and Wales occurred on sugar apple, mango, and guava (Korycinska, 2012).

Conogethes spp. larvae have been intercepted at U.S. ports (AQAS, 2014) and in Hawaii, but it is not established there (Nishida, 2002). The United States allows peaches into Guam and Commonwealth of the Northern Mariana Islands (CNMI) from Canada, Korea, and certain parts of Japan and ginger into all ports from all countries (ACIR, 2024).

Use the PPQ Commodity Import and Export manuals listed below to determine 1) if host plants or material are allowed to enter the United States from countries where the organism is present and 2) what phytosanitary measures (e.g., inspections, phytosanitary certificates, post entry quarantines, mandatory treatments) are in use. These manuals are updated regularly.

**Agricultural Commodity Import Requirements (ACIR):** ACIR provides a single source to search for and retrieve entry requirements for imported commodities. https://acir.aphis.usda.gov/s/

**Treatment Manual:** This manual provides information about treatments applied to imported and domestic commodities to limit the movement of agricultural pests into or within the United States.

https://www.aphis.usda.gov/import\_export/plants/manuals/ports/downloads/treatment.pdf

#### Potential Distribution within the United States

Much of the species' distribution occurs in the tropics and subtropics; however, it has also been recorded in northern Japan and China. The optimal temperature range for its development and survival is between 73°F and 81°F with the highest survival and fecundity at 73°F. Temperatures above 88°F negatively impact larval development, while the preoviposition stage requires a range of 46°F to 58°F (Du et al., 2012).

Based on the known distribution data of this species and comparing those climates to Plant Hardiness Zones (Takeuchi et al., 2018), we estimate that this pest could establish in Plant Hardiness zones 9-12 in the United States. The southern United States, Hawaii, and Puerto Rico are at risk for multigenerational establishment due to suitable climate. However, the SAFARIS Climate suitability map indicates that most of the continuous United states may be susceptible to invasion, with northern states only suitable for a single generation.

## **Survey and Key Diagnostics**

## **Approved Methods for Pest Surveillance\*:**

For the current approved methods and guidance for survey and identification, see Approved Methods for Pest Surveillance (AMPS) pest page on the CAPS Resource and Collaboration website, at <a href="https://approvedmethods.ceris.purdue.edu/">https://approvedmethods.ceris.purdue.edu/</a>.

### References

- ACIR, 2024. Agricultural Commodity Import Regulations (ACIR). United States Department of Agriculture.
- Alagar, M., Rachana, K.E., Bhat, S.K., Rahman, S. and Rajesh, M.K., 2013. Biology, damage potential and molecular identification of *Conogethes punctiferalis* Guenee in cocoa. Journal of Plantation Crops, 41(3): 350-356.
- Aoshima, M., Naka, H. and Tsuchida, K., 2020. Molecular phylogeny of the yellow peach moth, *Conogethes punctiferalis* (Lepidoptera: Crambidae): distribution of two genetic lineages across Japan. Applied Entomology and Zoology, 55: 231-240.
- AQAS, 2014. Agricultural Quarantine Activity System (AQAS) PPQ F280 Data. United States Department of Agriculture, Animal and Plant Health Inspection Service, Plant Protection and Quarantine.
- Armstrong, K., 2010. DNA barcoding: a new module in New Zealand's plant biosecurity diagnostic toolbox. EPPO Bulletin, 40(1): 91-100.
- Astridge, D., 2001. Insect fauna surveys on rambutan, durian and mangosteen in North Queensland. Technical Bulletin Department of Primary Industry and Fisheries, Northern Territory of Australia: 75-79.
- Biosecurity New Zealand, 2007. Importation into New Zealand of durian (*Durio zibethinus*) fresh fruit from Thailand: datasheets, New Zealand Ministry of Agriculture and Forestry.
- Chakravarthy, A.K., 2018. The black spotted, yellow borer, *Conogethes punctiferalis* Guenée and allied species. Springer, 357 pp.
- Chaovalit, S., Yoshiyasu, Y., Hirai, N. and Pinkaew, N., 2019. A taxonomic revision of the genus *Conogethes* (Lepidoptera, Crambidae) in Thailand. Lepidoptera Science, 70(2): 65-88.
- Chettri, P., 2022. Supplementary checklist of moth fauna of Darjeeling Hills, West Bengal, India. International Journal of Entomology Research, 7(7): 40-49.
- Chong, K.K., Ooi, P.A.C. and Tuck, H.C., 1991. Crop Pests and their Management in Malaysia. Tropical Press Sdn. Bhd., Kuala Lumpur, Malaysia, 242 pp.
- Devasahayan, K.M. and Abdulla Koya, K.M., 2005. Insect Pests of Ginger (Chapter 10), In P. N. Ravindran & K. N. Babu (Eds.), Ginger: The Genus: Zingiber, pp. 367-390.
- Devi, G.T.E.N., Viji, C.P., Salomi Suneetha, D.R. and Sekha, V., 2021. Seasonal incidence of fruit borers (*Conogethes punctiferalis* and *Deudorix isocrates*) in guava cv. Taiwan white. Journal of Entomology and Zoology Studies, 9(2): 282-286.
- Du, Y.-L., Li, J. and Wang, Z.-Y., 2018. Research Progress of *Conogethes punctiferalis* (Lepidoptera: Crambidae) in China. In: A.K. Chakravarthy (Editor), The black

- spotted, yellow borer, *Conogethes punctiferalis* Guenée and allied species. Springer Nature Singapore Pte Ltd., Bengaluru, Karnataka, India, pp. 45-66.
- Du, Y.L., Guo, H.M., Sun, S.L., Zhang, M.Z., Zhang, A.H. and Wang, J.B., 2012. Effects of temperature on the development and reproduction of the yellow peach moth, *Conogethes punctiferalis* (Lepidoptera: Pyralidae). Acta Entomologica Sinica, 55(5): 561-569.
- EPPO, 2024. EPPO database on quarantine pests for *Conogethes punctiferalis*. European and Mediterranean Plant Protection Organization (EPPO).
- Ganesha, C.A.K., Naik, M.I., Basavaraj, K. and Naik, C.M., 2013. Biology of castor shoot and capsule borer, *Conogethes punctiferalis* (Guenee) (Lepidoptera: Pyralidae). Current Biotica, 7(3): 188-195.
- Gour, T. and Sriramulu, M., 1992. Grapevine, *Vitis vinifera* Linn. A new host of castor shoot and capsule borer, *Conogethes punctiferalis* (Guenée).
- Hayden, J.E., 2017. *Asturodes fimbriauralis* (Guenee), a crambid moth, a new Continental USA record. Entomology Tri-ology, 56(4): 7.
- Husain, M., Nargis, A. and Noor, P., 1987. Studies on the insect pest of mango (*Mangifera indica* L.) of Rajshahi. Bangladesh Journal of Scientific and Industrial Research, 22(1-4): 191-194.
- Inoue, H. and Yamanaka, H., 2006. Redescription of *Conogethes punctiferalis* (Guenee) and description of two new closely allied species from Eastern Palaearctic and Oriental regions (Pyralidae, Pyraustinae). Tinea, 19(2): 80-91.
- Irungbam, J.S., Chib, M.S. and Wangdi, K., 2016. Taxonomic review of the superfamily Pyraloidea in Bhutan (Lepidoptera). Journal of Asia-Pacific Biodiversity, 9(3): 355-382.
- Jeong, N.-R., Kim, M.-J., Kim, S.-S., Choi, S.-W. and Kim, I.-S., 2021. Morphological, Ecological, and Molecular Divergence of *Conogethes pinicolalis* from *C. punctiferalis* (Lepidoptera: Crambidae). Insects, 12: 455.
- Kadoi, M. and Kaneda, M., 1990. Development of yellow peach moth, *Conogethes punctiferalis* (Guenée) on apple fruit. Research Bulletin of the Plant Protection Service, 26(2): 61-63.
- Kim, J., Jung, S. and Kim, Y.U., 2024. Pheromone-based mating disruption of *Conogethes punctiferalis* (Lepidoptera: Crambidae) in chestnut orchards. Insects, 15(6): 445.
- Kondo, A., Nagata, K. and Mochizuki, F., 2008. Geographical differences in pheromone trap performance in the yellow peach moth, *Conogethes punctiferalis* (Guenée)(Lepidoptera: Pyralidae) occurring in Japanese peach orchards. Jpn J Appl Entomol Zool Chugoku Branch, 50: 35-38.
- Korycinska, A., 2012. Rapid assessment of the need for a detailed Pest Risk Analysis for *Conogethes punctiferalis* (Guenée), The Food and Environment Research Agency.
- Kumar, H. and Kalkal, D., 2022. Seasonal incidence and biology of *Conogethes punctiferalis* Guenee (Lepidoptera: Pyralidae) on Guava. Journal of Agriculture and Ecology, 13: 92-98.
- Kumar, K., Chakravarthy, A. and Khader Khan, H., 2017. Biology of castor shoot and capsule borer, *Conogethes punctiferalis* (Guenee) on castor (*Ricinus communis* L.). Int J Sci Environ Technol, 6(2): 1134-1139.

- Kumar, S., Gaur, R.K. and Yadav, S., 2020. Bioecology of castor capsule borer (*Conogethes punctiferalis* Guen.), in South West Haryana. Journal of Entomology and Zoology Studies, 8(6): 925-929.
- Kumar, S., Kurian, J.T., Selvakaran, D., Vasudevan, H. and D'Silva, S., 2018. Mermithid parasitism of shoot borer (*Conogethes punctiferalis*) infesting ginger and turmeric and its biocontrol potential. Annals of Applied Biology, 173: 243-250.
- Li, D.Y., Ai, P.P., Du, Y.L., Sun, S.L. and Zhang, M.Z., 2015. Effects of different host plants on the development and reproduction of Yellow Peach Moth, *Conogethes punctiferalis* (Guenée, 1854) (Lepidoptera: Crambidae). Austral Entomology, 54: 149-153.
- Loc, H., Kumar, K. and Chakravarthy, A., 2018. Status of *Conogethes punctiferalis* (Guenée) in South of Vietnam. In: A.K. Chakravarthy (Editor), The Black spotted, Yellow Borer, *Conogethes punctiferalis* Guenée and Allied Species. Springer Nature Singapore Pte Ltd, Bengaluru, Karnataka, India, pp. 67-80.
- Luo, Z. and Honda, H., 2015. Olfactory and biophysical assessment of the oviposition stimulating potential of host and non-host plants for the yellow peach moth, *Conogethes punctiferalis* (Lepidoptera: Crambidae). Applied Entomology and Zoology, 50: 183-189.
- Mally, R., 2018. Moths of the genus Conogethes: taxonomy, systematics, and similar species. In: A.K. Chakravarthy (Editor), The Black spotted, Yellow Borer, *Conogethes punctiferalis* Guenée and Allied Species. Springer Nature Singapore, Singapore, pp. 1-12.
- Mally, R., Hayden, J., Neinhuis, C., Jordal, B. and Nuss, M., 2019. The phylogenetic systematics of Spilomelinae and Pyraustinae (Lepidoptera: Pyraloidea: Crambidae) inferred from DNA and morphology. Arthropod Systematics & Phylogeny, 77(1): 141-204.
- McQuate, G.T., Cossé, A., Sylva, C.D. and MacKay, J.A., 2019. Field evaluation of a binary sex pheromone for sweetpotato vine borer (Lepidoptera: Crambidae) in Hawaii. Journal of Insect Science, 19(1): 21.
- Nishida, G.M., 2002. Hawaiian Terrestrial Arthropod Checklist (4th ed.). Hawaii Biological Survey Bishop Museum, Honolulu, HI, 1-313 pp.
- Nuss, M., Landry, B., Mally, R., Vegliante, F., Tränkner, A., Bauer, F., Hayden, J., Segerer, A., Schouten, R., Li, H., Trofimova, T., Solis, M.A., De Prins, J. and Speidel, W., 2003-2025. Global Information System on Pyraloidea.
- Púcat, A., 1995. *Conogethes punctiferalis*, Yellow Peach Moth. Canadian Food Inspection Agency.
- Robinson, G.S., Tuck, K.R. and Schaffer, M., 1994. A field guide to the smaller moths of South-East Asia, Malaysia: Malaysian Nature Society, pp. 335.
- Royals, H.R., Gilligan, T.M. and Passoa, S.C., 2017. Screening Aid: Yellow Peach Moth, *Conogethes punctiferalis* (Guenée), USDA-APHIS-PPQ National Identification Services. USDA-APHIS-PPQ-S&T, Identification Technology Program, Fort Collins, CO, pp. 1-5.
- Schläger, S., Beran, F., Groot, A.T., Ulrichs, C., Veit, D., Paetz, C., Karumuru, B.R., Srinivasan, R., Schreiner, M. and Mewis, I., 2015. Pheromone blend analysis and cross-attraction among populations of *Maruca vitrata* from Asia and West Africa. Journal of Chemical Ecology, 41: 1155-1162.

- Shashank, P., Doddabasappa, B., Kammar, V., Chakravarthy, A. and Honda, H., 2015. Molecular characterization and management of shoot and fruit borer *Conogethes punctiferalis* Guenee (Crambidae: Lepidoptera) populations infesting cardamom, castor and other hosts, New Horizons in Insect Science: Towards Sustainable Pest Management. Springer, pp. 207-227.
- Shashank, P., Kammar, V., Mally, R. and Chakravarthy, A., 2018. A new Indian species of shoot and capsule borer of the genus *Conogethes* (Lepidoptera: Crambidae), feeding on cardamom. Zootaxa, 4374(2): 215-234.
- Solis, M.A., Phillips-Rodríguez, E., Hallwachs, W., Dapkey, T. and Janzen, D.H., 2020. Asturodes Amsel (Lepidoptera: Crambidae: Spilomelinae): Three New Species from the Western Hemisphere and Food Plant Records from Area de Conservación Guanacaste, Costa Rica. Proceedings of the Entomological Society of Washington, 122(1): 147-171.
- Stanley, J., Chandrasekaran, S. and Preetha, G., 2009. *Conogethes punctiferalis* (Lepidoptera: Pyralidae) its biology and field parasitization. Indian Journal of Agricultural Sciences, 79(11): 906-909.
- Sutrisno, H., 2007. Rapid assessment on macro-moth fauna at Nusa Barong Nature Reserve: A low diversity. Berkala Penelitian Hayati, 12: 115-120.
- Takeuchi, Y., Fowler, F. and Joseph, A.S., 2018. SAFARIS: Global Plant Hardiness Zone Development. North Carolina State University, Center for Integrated Pest Management and United States Department of Agriculture, Animal and Plant Health Inspection Service, Plant Protection and Quarantine, Science and Technology, Plant Epidemiology and Risk Analysis Laboratory, Raleigh, NC, pp. 6.
- Truscott, L., 2007. *Conogethes punctiferalis* (Guenee, 1854)(Lepidoptera: Crambidae) at light in Cornwall, newly recorded for Europe. Europe Entomol Gaz, 58: 203-204.
- USDA-PCIT, 2024. Phytosanitary export database (PExD): Harmful organisms by country and commodity report format: *Conogethes punctiferalis*. United States Department of Agriculture.
- Wan, N.F., Zhang, Y.M., Huang, K.H., Ji, X.Y. and Jiang, J.X., 2016. Ecological engineering of trap cropping promotes biocontrol services in peach orchard ecosystems. Ecological Engineering, 90: 427-430.
- Wang, J., Zhang, T.-T., Wang, Z.-Y., He, K.-L., Yong, L. and Jing, L., 2014. Molecular taxonomy of *Conogethes punctiferalis* and *Conogethes pinicolalis* (Lepidoptera: Crambidae) based on mitochondrial DNA sequences. Journal of Integrative Agriculture, 13(9): 1982-1989.
- Waterhouse, D.F., 1993. The major arthropod pests and weeds of agriculture in Southeast Asia: Distribution, importance, and origin. Australian Centre for International Agricultural Research, Canberra, Australia, 141 pp.
- USDA-APHIS-PPQ-ST staff developed this datasheet. Cite this document as:
- PPQ. 2024. Cooperative Agricultural Pest Survey (CAPS) Pest Datasheet for *Conogethes punctiferalis* (Crambidae): Yellow Peach Moth. United States Department

of Agriculture, Animal and Plant Health Inspection Service, Plant Protection and Quarantine (PPQ), Raleigh, NC.

#### Versions

**June 2015:** Datasheet completed (Version 1)

February 2025: (Version 2)

Updated to new template

Added new name to Common Names section

Updated Easily Mistaken Species section

Updated Biology & Ecology section

Updated **Known Hosts** section

Updated **Pest Importance** section

Updated **Known Distribution** section

Updated Potential Distribution within the United States section

Updated guidance for Approved Methods section

Created EndNote Library for C. punctiferalis

## Reviewer(s)

M. Alma Solis, Research Entomologist, Systematic Entomology Laboratory (SEL), ARS-NEA, USDA

A.K. Chakravarthy, Ph.D., Society for Science and Technology Applications (SSTA), Bangalore, India