



## Pacific Pests, Pathogens & Weeds - Mini Fact Sheet Edition

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### Rice gold-fringed borer (410)



Photo 1. Adult gold-fringed rice borer, *Chilo auricilius* (male).



Photo 2. Adult gold-fringed rice borer, *Chilo auricilius* (female).



Photo 3. Damage ('deadhearts') to rice stem by *Chilo auricilius*.



Photo 4. 'Whitehead' - a symptom caused by stem borers: the base of the panicle is damaged preventing it from emerging or, if already emerged, the grain is unfilled and white.

### Summary

- Restricted. South and Southeast Asia, Oceania. In Papua New Guinea.
- Minor on rice; a pest of sugarcane. Also attacks sorghum, maize and wild grasses.
- Larvae tunnel through internodes of stem to the growing point, killing it; stems pull out easily ('deadhearts'). Panicles fail to emerge, or emerge with unfilled grain ('whiteheads').
- Eggs (scale-like) laid in 2-5 rows, white then black. Larvae, white with five bluish-purple lines along body, dark heads. Adult forewings yellowish to brownish, with silver dots and gold fringe; hindwings light brown. Nocturnal.
- Natural enemies: many egg and larval parasitoids and predators.
- Biosecurity: introduction possible on produce contaminated with infested stems of host plants.
- Cultural control: plough land well (to bury larvae/pupae of previous crop); plant at higher density than normal; rotate, e.g., legumes; synchronise plantings with neighbours; submerge eggs by raising water occasionally; weed; apply split applications of N; harvest at ground level to remove larvae; plough in stubble, unharvested plants and weeds; use resistant (short, high tillering, early maturing) varieties.
- Chemical control: unlikely to be needed. Use abamectin. Avoid broad-spectrum insecticides to preserve natural enemies.

### Common Name

Rice gold-fringed borer

### Scientific Name

*Chilo auricilius*. Another species, *Chilo suppressalis* (the Asiatic stem borer, or striped stem borer), occurs in Australia, but not in the rest of Oceania. It is also similar to *Chilo polychrysus*, which occurs in India, Indonesia and Thailand. A moth in the Crambidae.

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Information (and Photo 4) from Rice Knowledge Bank. IRRI. (<http://www.knowledgebank.irri.org/training/fact-sheets/pest-management/insects/item/stem-borer>); and CABI *Chilo auricilius* (gold-fringed rice borer) (2017) Crop Protection Compendium. ([www.cabi.org/cpc](http://www.cabi.org/cpc)); and (including Photo 3) Anderson S, Tran-Nguyen L (2012) Gold-fringed Rice Borer (*Chilo auricilius*). (Source: N. Sallam DAFF Biosecurity.) PaDIL - (<http://www.padil.gov.au>); and from *Chilo auricilius*. Wikipedia. ([https://en.wikipedia.org/wiki/Chilo\\_auricilius](https://en.wikipedia.org/wiki/Chilo_auricilius)).

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