Short Communication

The first record of the Asian bamboo weevil *Cyrtotrachelus rufopectinipes* Chevrolat, 1883 (Coleoptera: Curculionidae: Dryophthorinae) from Cambodia

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The Dryophthorinae Schoenherr, 1825 is one of the few well-defined Curculionidae subfamilies based on morphological and molecular data (Oberprieler *et al*., 2007; McKenna *et al*., 2009; Jordal *et al*., 2014; Shin *et al*., 2018). The group contains five tribes consisting of 153 genera and approximately 1,200 species worldwide (Alonso-Zarazaga & Lyal, 1999; Oberprieler *et al*., 2007; Anderson & Marvaldi, 2014; Chamorro *et al*., 2021). *Cyrtotrachelus*, a genus of Asian bamboo weevils, was established by Schoenherr (1838) and includes more than 22 described species (Heller, 1923). Three are serious pests, namely *C. buquetii* Guerin-Meneville (which includes two subspecies, the nominotypical *C. b. buquetii* and *C. b. borealis* (Jordan)), *C. thompsoni* Alonso-Zarazaga & Lyal (=*C. longimanus* (Fabricius)), and *C. dichrous* Fairmaire (Singh & Bhandari, 1988; Attajarusit, 1996; Wang *et al*., 1998; Alonso-Zarazaga *et al*., 2017; Tseng & Ho, 2019). Other species in the genus include *C. bipartitus* Hartmann, *C. feae* Faust, *C. himalayanus* Heller, *C. lar* Erichson & Burmeister and *C. rufopectinipes* Chevrolat (Singh, 2016; Alonso-Zarazaga *et al*., 2017). Members of the genus are broadly distributed in India, Andaman Island, Nepal, Bangladesh, South China, Taiwan, Japan, Sri Lanka, Sumatra, Java, Malacca, Burma, Borneo, Thailand, Malaysia, Laos, Vietnam, Philippines and Cambodia (Heller, 1923; Morimoto, 1978; Kapur, 1954; Choldumrongkul, 1994; Alonso-Zarazaga & Lyal, 1999; Thapa, 2000; Ju *et al*., 2005; Choudhury *et al*., 2007; Nair, 2007; Hill, 2008; He *et al*., 2009, Panda, 2011; Hogarth, 2013; Singh & Ramesha, 2018). To date, two species, *C. dichrous* Fairmaire, 1878 and *C. thompsoni* Alonso-Zarazaga & Lyal, 1999 have been recorded in Cambodia (Heller, 1923; Morimoto, 1978; Singh & Ramesha, 2018). Alonso-Zarazaga & Lyal (1999) proposed *C. thompsoni* as a replacement name for C. *longimanus* (Fabricius), originally described in *Curculio* Linnaeus, as the latter is a junior homonym (non Forster, 1771). In this article, we present the first record for *C. rufopectinipes* Chevrolat, 1883 in Cambodia.

The biology of *Cyrtotrachelus* spp. is relatively well known due to the economic importance of some of its species. The beetles prefer monocotyledons as host plants, mainly bamboos in India, China, Vietnam and Thailand (Liu *et al*., 1993; Reid, 1995; Chuong *et al*., 2005; Choudhury *et al*., 2007; Shu & Wang, 2015; Patil, 2017; Singh & Ramesha, 2018). An adult female of *C. thompsoni* may lay around 40 elongate eggs (Fu *et al*., 2007). Eggs are placed into oviposition holes made approximately 25 cm from the top of growing bamboo shoots (Singh & Bhandari, 1988; Chuong *et al*., 2005; Wang *et al*., 2005; Panda, 2011). A single bamboo shoot may frequently carry four eggs in different places (Panda, 2011) and a larva emerges from each egg after one or two weeks (Nair, 2007). For approximately four weeks, larvae live inside the host-plant by moving upward (Nair, 2007; Panda, 2011). The last instar larvae burrow into the soil to pupate between 18

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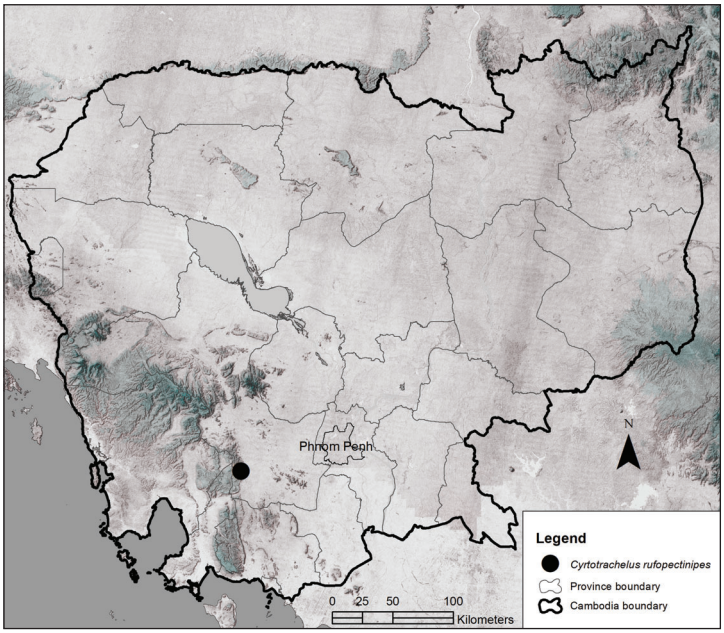

Fig. 1 Location of first record of *Cyrtotrachelus rufopectinipes* Chevrolat, 1883 in Chambok, Kampong Speu Province, Cambodia.

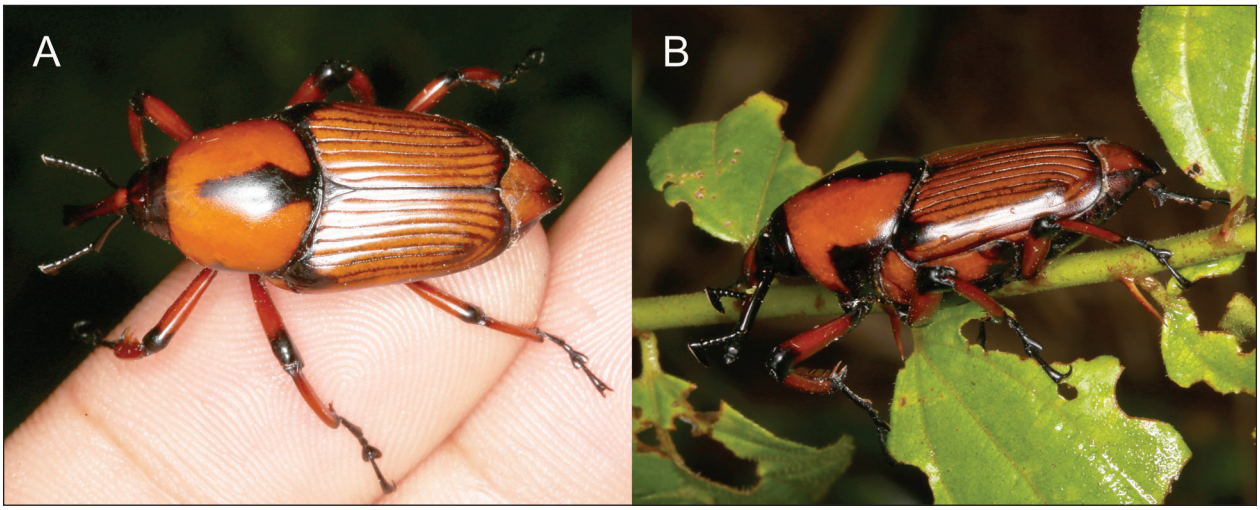

Fig. 2 Live *Cyrtotrachelus rufopectinipes* Chevrolat, 1883 in Chambok, Kampong Speu Province, Cambodia. A) Dorsal view, B) Lateral view (© Phauk Sophany).

to 27 cm deep, with 0.5 to 2.5 m distance from the culms where it remains for three to four weeks (Chuong *et al*., 2005; Patil, 2017). New adults feed on growing shoots of bamboo and after two days of feeding, search for mates (Fu *et al*., 2007). Chuong *et al*., (2005) reported *C. thompsoni* may damage approximately 40% of young shoots in *Dendrocalamus* forest in Vietnam. Moreover, at least 60% of growing shoots of *Bambusa multiplex* were damaged by *C. buquetii* during the wet season in China (Ju *et al*., 2005).

Our record of *C. rufopectinipes* in Cambodia is based on photographs taken during night time sampling of insects by the Cambodian Entomology Initiatives team in Chambok ecotourism site in Kampong Speu Province (Fig. 1). The ecotourism site was established in 2003 and comprises 82.57 km^2 of land which borders Kirirom National Park (Lonn, 2013). Overall, the natural landscape at the site consists of bamboo, degraded semi-evergreen forests and grasslands with deciduous forest (Sin *et al*., 2020; Chhorn *et al*., 2020).

***Cyrtotrachelus rufopectinipes* Chevrolat, 1883** (Fig. 2A-2B)

Cyrtotrachelus birmanicus Faust, 1894; *Cyrtotrachelus montanus* Heller, 1923; *Cyrtotrachelus subnotatus* Voss, 1931

Diagnosis: This species is characterized by a red pronotum with longitudinal black vittae exceeding the median region. The elytra are red with striae I-V strongly punctate compared to striae VII-X (Fig. 2A). The front leg is shorter than body length. As we did not collect a voucher specimen, our identification is based on photographs and observations made in the field which agree with the identification key provided by Tseng & Ho (2019).

Distribution: Cyrtotrachelus rufopectinipes is widely distributed in China, northeast India (Sikkim & Assam), Sri Lanka, Java, Nias, Burma, and Vietnam (Tonkin) (Heller, 1923; Singh & Ramesha, 2018). Our observation constitutes the first record of the species in Cambodia.

Record locality: We observed and photographed the species on 18 October 2019 on a trail in bamboo forest (11°22′41.14″N, 104°6′50.85″E, 110 m a.s.l) within the Chambok ecotourism site, Phnom Srouch District, Kampong Speu Province.

Including our record, three species of *Cyrtotrachelus* are now documented in Cambodia. Bamboo forests account for around 0.33% (35,802 ha) of forests in the country (FA, 2007) and play a significant role in contributing to the subsistence livelihoods of rural people and providing natural habitat for biodiversity (Mouy, 2010). However, interactions between *Cyrtotrachelus* species and bamboo have not been documented in the country, nor have the potential damage caused by some of these species. *Cyrtotrachelus* species include several serious pests of bamboo in Southeast Asia (Tseng & Ho, 2019) and it would be interesting to learn more about their biology and distribution in the region. Investigations are needed to determine the potential impact, if any, these species have on native bamboo stands in Cambodia.

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