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## Taxonomic study of the genus *Assara* Walker (Lepidoptera, Pyralidae, Phycitinae) in NE China, with description of a new species

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### Abstract

Four species of the genus *Assara* Walker, 1863 are revised from NE China. Among them, *Assara yanbianensis* Bae & Qi sp. n. is described as new to science and *A. terebrella* (Zincken, 1818) is newly recorded from China. A key to the NE Chinese species of the genus *Assara* with illustrations of adults and genitalia are presented.

**Key words:** Lepidoptera, Pyralidae, Phycitinae, *Assara*, new species, NE China

### Introduction

The genus *Assara* (Phycitinae) was established by Walker (1863), with the type species *A. albicostalis* Walker, 1863 from Sarawak, Malaysia. To date, this genus comprises 26 species in the world, most of which are distributed in the Palearctic, Oriental and Australian Regions (Roesler 1973, 1983, 1987; Yamanaka 1980, 1994, 2008; Yoshiyasu 1991; Du *et al.* 2002; Sasaki & Tanaka 2004). The genus *Assara* can usually be recognized by the following characters: the vein R3 and R4 of forewing stalked about 2/3 length of R3; uncus tongue-shaped or triangular; gnathos slim and hooked distally; juxta sclerotized, with lateral lobes long; vinculum short; aedeagus slim, without cornutus.

In the adjacent areas of NE China, five species of genus *Assara* have been reported from South Korea (Bae *et al.* 2008), nine species have been reported from Japan (Yamanaka 1980, 1994, 2008; Yoshiyasu 1991; Sasaki & Tanaka 2004), and two species have been reported from the Far East of Russia (Kirpichnikova 2009). Previously, eleven species of *Assara* have been reported from China (Li *et al.* 2012), although the genus has not yet been recorded from NE China prior to this study. Accordingly, we report 4 species from NE China in the present article, one of them, *Assara yanbianensis* sp. nov. is described as new to science, and *A. terebrella* (Zincken, 1818) is reported for the first time from China. The type specimens examined are deposited in the School of Forestry, Northeast Forestry University, Harbin, China (NEFU). In addition, some specimens examined have been deposited in the collection of Incheon National University (INU).

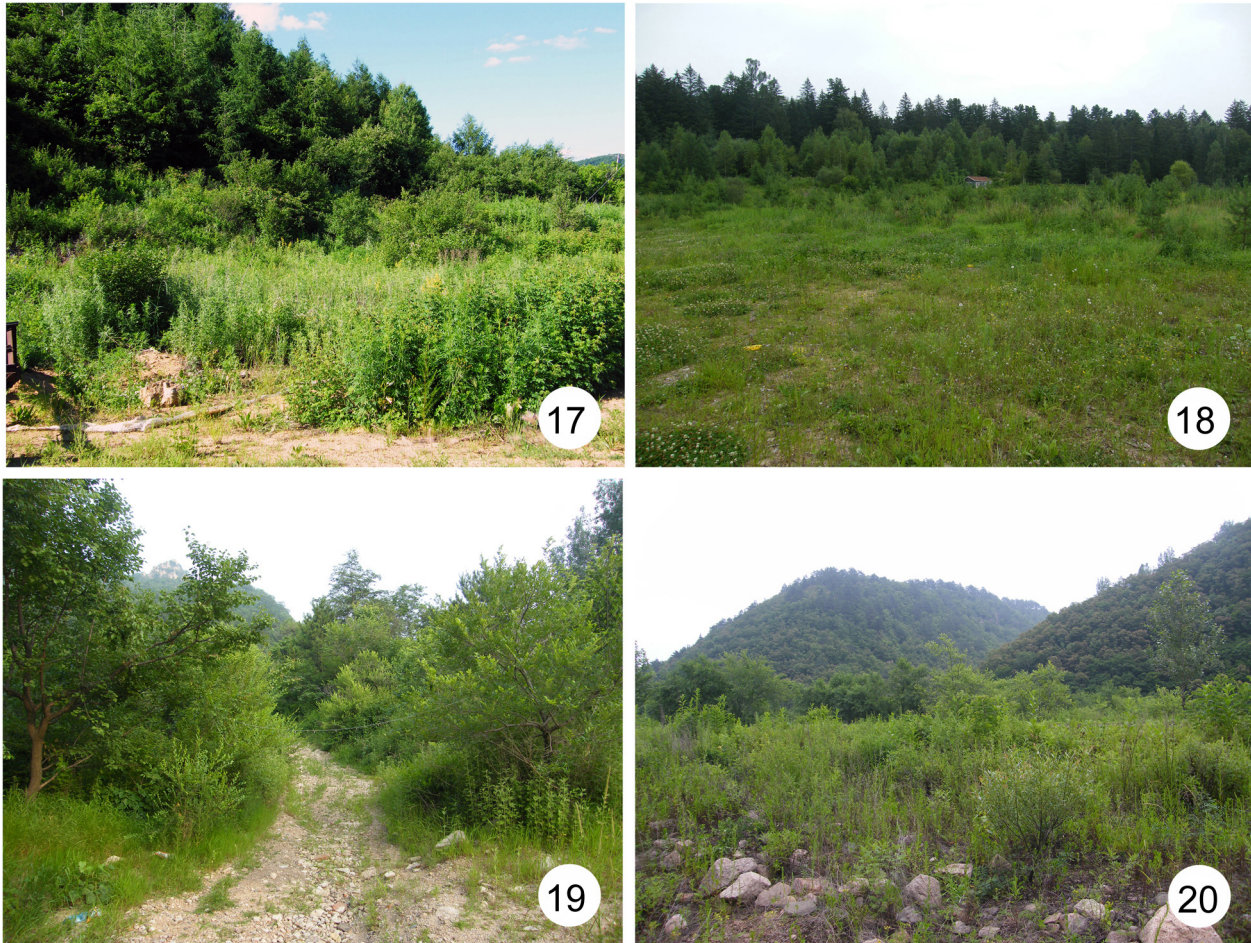
### Taxonomic accounts

#### Genus *Assara* Walker, 1863

*Assara* Walker, 1863, *List. Spec. Lepid. Ins. Coll. Brit. Mus.* 27: 79. TS: *Assara albicostalis* Walker, 1863.

*Cateremna* Meyrick, 1882, *Proc. Linn. Soc. N. S. W.* 7: 156. TS: *Euzophera microdoxa* Meyrick, 1879.

**Diagnosis.** The genus *Assara* is similar to *Euzophera* Zeller, 1867, but can be distinguished by the following characters: the gnathos slim, distally hooked; transtilla with terminal margin concave or quadrate; juxta with



**FIGURE 17–20.** Natural environment of collecting sites. 17. Prov. Jilin, Wangqing County. 18. Prov. Heilongjiang, Yichun, Dailing, Liangshui. 19. Prov. Liaoning, Jiangchang, Mt. Bailang. 20. Prov. Jilin, Helong.

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## References

- Bae, Y.S., Byun, B.K. & Paek, M.K. (2008) *Pyralid Moths of Korea (Lepidoptera, Pyraloidea)*. Korea National Arboretum, Seoul, 426 pp.
- Bae, Y.S. (2004) *Superfamily Pyraloidea II (Phycitinae & Crambinae etc.)*, *Economic Insects of Korea* 22. *Insecta Koreana Supplement* 29. National Institute of Agricultural Science and Technology, Suwon, 207 pp.
- Caradja, A. (1910) Beitrag zur Kenntnis über die geographische Verbreitung der Pyraliden des europäischen Faunengebietes nebst Beschreibung einiger neuer Formen. *Deutsche Entomologische Zeitschrift Iris*, 24, 105–147.
- Choi, H.Y., Paek, M.K. & Bae, Y.S. (1998) Taxonomic note on nine species of the tribe Phycitini (Lepidoptera, Pyralidae, Phycitinae) from Korea (I). *Insecta Koreana*, 15, 23–39.
- Du, Y.L., Li, H.H. & Wang, S.X. (2002) A taxonomic study on the genus *Assra* Walk from China (Lepidoptera: Pyralidae, Phycitinae). *Acta Zootaxonomica Sinica*, 27, 8–19.
- Emmet, A.M. (1988) *A field guide to smaller British Lepidoptera*. British Entomological & Natural History Society, London,

288 pp.

- Horak, M. (1994) Identity of two Phycitinae pests on Macadamia (Lepidoptera: Pyralidae: Phycitinae). *Journal of the Australian Entomological Society*, 33, 235–244.  
<http://dx.doi.org/10.1111/j.1440-6055.1994.tb01225.x>
- Inoue, H. (1954) *Pyralidae. Check List of the Lepidoptera of Japan*. Tokyo, 2, 120–196.
- Inoue, H. (1982) Pyralidae. In: Inoue, H., Sugi, S., Kuroko, H., Moriuti, S., Kawabe, A. (Eds.), *Moths of Japan*. Kodansha, Tokyo, 1, 307–404, 2, 223–254.
- Kirpichnikova, V.A. (2009) *Pyralids of the Fauna of Russian Far East*. Russia, Vladivostok, Dalnauka, 518 pp.
- Li, H.H. & Ren, Y.D. (2009) *Insect fauna of Henan (Lepidoptera: Pyraloidea)*. Science Press, Beijing, China, 440 pp.
- Li, H.H. (2012) *Microlepidoptera of Qinling Mountains (Insecta: lepidoptera)*. Science Press, Beijing, 1271 pp.
- Ragonot, E.L. (1901) Monographie des Phycitinae et des Galleriinae. In: Romanoff, N.M. (Ed.), *Mémoires sur les Lépidoptères VIII*. St. Petersburg, pp. I–XIV, 1–507, 560, pls. XXIV–LVII.
- Rebel, H. (1901) Pyralidae. In: Staudinger, O. & Rebel, H. (Eds.), *Catalog der Lepidopteren des Palaearctischen Faunengebietes 2*. R. Friedländer & Sohn, Berlin, pp. 1–70.
- Roesler, R.U. (1965) *Untersuchungen über die Systematik und Chorologie des Homoeosoma-Ephestia-Komplexes (Lepidoptera: Phycitinae)*. Inaugural-Dissertation, Saarbrücken, 266 pp.
- Roesler, R.U. (1973) Phycitinae. Trifine Acrobassiina. In: Amsel, H.G., Gregor, F., Reisser, H. (Eds.), *Microlepidoptera Palaearctica 4. Vol. 1. & 2*. Georg Fromme & Co., Wien, i–xvi, 752 pp. & 137 pp., pls. 1–170.
- Roesler, R.U. (1983) Die Phycitinae von Sumatra (Lepidoptera, Pyralidae). *Heterocera Sumatrana*, 3, 1–136.
- Sasaki, A. & Tanaka, K. (2004) A new species of *Assara* Walker (Pyralidae, Phycitinae) from Japan, feeding on *Balanophora tobiracola* (Balanophoraceae). *Japan Heterocerists' Journal*, 230, 85–88.
- Sinev, S.J. (1986) *A guide to the insects of the European part of USSR Lepidoptera. Part IV, Family Phycitidae*. Opredeliteli Faune SSSR, 504 pp.
- Walker, F. (1863) *Crambites & Tortricites-List of the Specimens of Lepidopterous Insects in the collection of the British Museum, Part 27*. Edward Newman, London, 286 pp.
- Yamanaka, H. (1980) Description of two new species of *Eurhodope* and synonymic notes of two known species belonging to *Eurhodope* and *Assara* from Japan (Lepidoptera: Pyralidae: Phycitinae). *Tyô to Ga*, 31, 66–73.
- Yamanaka, H. (1994) New and unrecorded species of the Phycitinae from Japan (Lepidoptera: Pyralidae). *Tinea*, 14, 33–41.
- Yamanaka, H. (2008) A new species of the genus *Assara* Walker from Japan (Pyralidae, Phycitinae). *Tinea*, 20, 170–172.
- Yoshiyasu, Y. (1991) A new species of *Assara* (Lepidoptera, Pyralidae) associated with the aphid gall. *Tyô to Ga*, 42, 261–269.
- Zincken, J.L.T.F. (1818) Die Lineeischen Tineen in ihre natürlichen Gattungen aufgelöst. *Magazin der Entomologie*, 3, 114, 133, 143.