

Taxonomic status of the oak gall wasp *Callirhytis hakonensis* Ashmead (Hymenoptera: Cynipidae), a candidate for native host of *Torymus beneficus* Yasumatsu et Kamijo (Hymenoptera: Torymidae), with a description of its sexual generation

Nakatada Wachi ^{1*} and Yoshihisa Abe ²

¹Graduate School of Systems Life Sciences, Kyushu University, Hakozaki, Fukuoka 812-8581, Japan

²Biosystematics Laboratory, Graduate School of Social and Cultural Studies, Kyushu University, Motoooka, Fukuoka 819-0395, Japan

*3sl07066m@sls.kyushu-u.ac.jp

Torymus beneficus Yasumatsu et Kamijo, 1979 is one of the very common native parasitoids attacking the invasive chestnut gall wasp, *Dryocosmus kuriphilus*. According to the original description of *T. beneficus*, the native host species for *T. beneficus* is *Andricus* sp., which induces leaf galls on *Quercus* sp. It is important to be certain of the native host for *T. beneficus* when we try to understand the effects of the introduced parasitoid, *T. sinensis*, on native gall wasps and their parasitoid communities.

Callirhytis hakonensis Ashmead, 1904 has been considered one of the candidates for a native host of *T. beneficus* according to its gall shape. The original description of this species is very simple and is based on a single adult female, with no mention of the presence of the transversely rugose mesoscutum, which is the main diagnostic feature of the genus *Callirhytis*. Some taxonomists have suggested that this female was most probably an asexual female of *Andricus*.

Comparisons of the external morphology of the holotype (female adult) of *C. hakonensis* and the female adults reared and identified as the asexual generation of this species by the late Mr. H. Masuda corroborated the accuracy of his identification. He previously demonstrated the heterogony in this gall wasp by rearing experiments. The holotype (the asexual generation) of this cynipid is redescribed, and female and male adults of the sexual generation are described on the basis of specimens reared by him.

Since adults of the asexual and sexual generations had the diagnostic features of the genus *Andricus* and not those of the genus *Callirhytis*, *C. hakonensis* should be transferred to the genus *Andricus*. Judging from the descriptions of the wasps and galls, *A. symbioticus* Kovalev and *A. attractus* Kovalev may be synonymized with this species.

	Asexual generation	Sexual generation (♀, ♂)	
Body length	 3-4 mm		 1.5-2mm
Head (anterior view)			
Head and mesosoma (dorsal view)			
Gall	 Autumn, Next Spring	 Spring	

Fig. 1. Asexual and sexual generations of *Callirhytis hakonensis*.