

# Survey of Egg Parasitoids of the Bean Bug, *Riptortus clavatus* Thunberg (Hemiptera: Alydidae) in Soybean Fields

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In endeavor of searching potent biological control agents against the bean bug, *Riptortus clavatus*, which gives severe damages to soybean pods, parasitoids were surveyed from eggs of soybean bugs in soybean fields. Three species of hymenopterous parasitoids were found in the collected eggs of *R. clavatus* and their total parasitism showed 78.6% during August to October in 2001. They were identified as *Gryon* sp. and *Trissolcus* sp. belonging to the Scelionidae, and one of unidentified species in Encyrtidae. Parasitic rates against *R. clavatus* egg by *Gryon* sp., *Trissolcus* sp. and an Encyrtid were 32.9, 11.6 and 33.1%, respectively in the field. Complete identification of those parasitoids is now undergoing to taxonomic specialists overseas. Only *Gryon* sp. attacked individually an egg of *R. clavatus*, but the other two species multi-parasited as polyembryony in the same host insect. *Trissolcus* sp. and an Encyrtid were also found in the sloe bug, *Dolycoris baccarum*. The dominant species in soybean field during September to October was *Gryon* sp. in Suwon, but the other two parasitoids in Chungnam and Chungbuk Provinces. *Gryon* sp. showed higher density in the early pod ripening period, but in the later periods, the density of Encyrtidae sp. and *Trissolcus* sp. was higher. The induced parasitic rates on *R. clavatus* eggs artificially-innoculated on soybean leaves showed the range from 17.4% to 50.0% during August and September.

When the parasitoids of *Gryon* sp. were reared on *R. clavatus* eggs in ambiguous room conditions, the developmental periods of it were between 7 to 24 days.