Developmental Comparision of Bean Bug, Riptortus clavatus Thunberg (Hemiptera: Alydidae) and Yellow-Brown Stink Bug, Halyomorpha halys Stål (Hemiptera: Pentatomidae) at Temperatures

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Development of Bean bug (BB), Riptortus clavatus Thunberg and Yellow-brown Stink Bug (YBSB), Halyomorpha halys Stål, which are considered as major sucking insect pests on soybean and fruits such as sweet persimmon and apple in Korea, were observed at four temperatures (20, 24, 28 and 32°C). Egg duration was significantly longer in BB (7.0 to 16.7 days) than that in YBSB (3.9 to 12.5 days). At 20, 24 and 28°C, nymphal durations of BB and YBSB were in the range of 23.0 to 37.8 days and 29.9 to 65.0 days, respectively. At 32°C, however, nymphal duration of BB was 18.1 days while all nymphs of YBSB were died within 2nd instar. Preoviposition of BB was greatly shorter with 5.4 to 10.8 days than that of YBSB with 9.1 to 43.1 days. Adult female longevity of BB was the longest with 49.0 days at 28°C and the shortest with 12.8 days at 20°C while YBSB was the longest with 75.3 days at 20℃ and 28.2 days 28℃ adversely. Accordingly, one generation period of BB and YBSB was 67.3, 79.6, 80.7 and 44.1 days at 20, 24, 28 and 32°C, and was 152.8, 102.4 and 62.6 days at 20, 24 and 28°C, respectively. The threshold temperature was 9.6°C in egg and 9.8°C in nymph of BB while was 13.8°C in egg and 13.3℃ in nymph of YBSB.