Factors Influencing Color Changes in *Hierodula patellifera* (Mantodea: Mantidae)

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Color polymorphism occurs among members of the family Mantodea (Ramsay 1990, Fauna of New Zealand 19, 96 pp.). Roberts (1937, Ann. Entomol. Soc. Am. 30: 96–109) reported that *Stagmomantis limbata* Hahn adult males are usually green but the females are divided about equally between green and brown phases. *Mantis religiosa* L. can often be found with different colorations: grass-green and brown and from yellow-ochre to brown-sepia (Battiston and Fontana 2010, B. Insectol. 63: 85–89). Coloration may be either genetically controlled or influenced by environmental factors (Okay 1953, B. Entomol. Res. 44: 299–315) and background (James 1944, Can. Entomol. 76: 113–116). *Hierodula patellifera* (Serville) is found in Japan, Hawaii, and Southeast Asia, and its body is green or brownish-purple (Perez 2005, Physiol. Entomol. 30: 42–47). Little attention has been paid to color changes in *H. patellifera*. Herein is reported a preliminary study focusing on color polymorphism in *H. patellifera*.

Four oothecae were collected in longan (*Dimocarpus longan* Lour.) and litchi (*Litchi chinensis* Sonn.) orchards (N 19°30.444', E 109°29.780') in 2011. Neonate *H. patellifera* were reared in separate transparent plastic cups (upper diameter 65.8 mm, bottom diameter 49.0 mm, height 71.8 mm) with a cover of white gauze. Upon reaching the 5th stadium, nymphs were placed individually in larger transparent plastic cups (upper diameter 83.0 mm, bottom diameter 57.5 mm, height 157.0 mm) until adults emerged. They were fed daily on a successive diet of artificial formula (Wang et al. 2014, China Plant Prot. 34: 5–8) and a variety of insects collected in the field, such as *Uroleucon formosanum* (Takahashi), *Dysmicoccus boninsis* (Kuwana), *Tenebrio molitor* L., and *Brontispa longissima* (Gestro), depending on...