

## GULF FRITILLARY, *AGRAULIS VANILLAE*, WITH LIGHT LARVAL VARIANTS IN FLORIDA (LEPIDOPTERA: NYMPHALIDAE)

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Early in 2000, during rearings of the Gulf fritillary, *Agraulis vanillae* (Linnaeus), in southwestern Florida by one of us (JRB), an extremely light larval variant was discovered (Fig. 1). The normal larval coloration of the Gulf fritillary is orange (Fig. 2), with more common variations often much darker in having the gray-black lateral strip enlarged over the lateral area of the body. Lighter variants of the larval coloration in Gulf fritillaries are known (Scott, 1986), but apparently have not been illustrated until recently (Honcoop, 1999, 2000) and not for the eastern North American subspecies, *A. v. nigrior* (Michener) (Fig. 1). In the Florida light larval variant reported on herein, most of the lateral area of the body has the normal gray-black stripe replaced with white (or cream-white) and the dorsum has mostly gray-black, with almost no orange evident. This is similar to that found more commonly in the western Gulf fritillary subspecies, *A. v. incarnata* (Riley) (see Honcoop, 1999, 2000), in regions of West Texas and westwards.

Rearing (by JRB) of the light variant began on 30 Jan 2000, with pupation on 2 Feb and adult emergence of a normal adult on 18 Feb. The nearly full-grown larva was collected and reared on *Passiflora suberosa* (Passifloraceae), a normal host in Florida for the species. Normal larvae were also found and reared on the same hostplant later the same winter, beginning in Mar 2000. The same individual plant was used for both rearings.

Since the Florida populations have not had these light larval variants reported on before and since the western subspecies have such larval variants more commonly, one can speculate whether intrusion of larval genes from the western populations has occurred in Florida due to the release of Gulf fritillaries imported from western regions of North America for live release in Florida. Further studies would be needed to verify the incidence of these larval variants in eastern Gulf fritillary larvae versus their incidence in western populations, but this may be a case where intrusions of western genes are changing the eastern named subspecies due to shipments of live butterflies to Florida, where such populations would not normally get to on their own. One wonders, however, whether such studies are already too late since there are no records of how many western butterflies may have already been shipped to Florida for live release prior to current import restrictions that were imposed a few years ago. In any case, to prevent the possibility of such unnatural gene flow in butterfly populations in Florida (even if this cannot yet be proven in the Gulf fritillary), Florida imposes a mandatory requirement that live butterfly imports into Florida must originate only from populations found east of the 100th Meridian (about through the central Great Plains from Texas north to Canada) but excluding the zone within 250 miles of Brownsville, Texas, where the northern Mexican fauna intrudes.



Fig. 1-2. Gulf fritillary larval forms in Florida: 1) white-striped variety (top), 2) normal orange-striped variety (photos © 2005 J. R. Brushwein).

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