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## OCCURRENCE OF TWO TYPES OF GYNANDROMORPHISM IN A SIBLING SERIES OF *Aedes (Stegomyia) craggi* (Barraud) (DIPTERA: CULICIDAE)<sup>1</sup>

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**ABSTRACT.** Anterior-posterior and bilateral gynanders of *Aedes (Stegomyia) craggi* (Barraud) were encountered in a sibling series of this species. The occurrence of two types of gynandromorphism

within such a series of mosquitoes has not been previously reported. Reports of mosquito gynandromorphs subsequent to, or not included in the tabulation of Brust (1966) are summarized.

Two gynandromorphs of *Aedes (Stegomyia) craggi* (Barraud) were found among the *Stegomyia* mosquitoes submitted by the SEATO Medical Research Laboratory, Bangkok. Both specimens were reared from eggs obtained from a wild-caught female biting man in a forest at Chiang Mai, Thailand. It is noteworthy that these 2 gynandromorphs are of 2 distinct types known as an anterior-posterior gynander and a bilateral gynander. Accompanying these 2 gynanders are another 12 specimens (7 males, 5 females) which were derived from the same female (mother). These are normal siblings. As far as it can be determined, this is the first time that 2 types of gynandromorphism have been reported from the

same sibling series. Craig and Hickey (1969:102) report 4 gynanders in one sibship of 16 individuals but do not indicate if 2 or more types were represented. The two gynanders are as follows:

(1). Anterior-posterior gynander, specimen No. (1)-2 with associated terminalia on slide (SEAMP 345, 73/302). This specimen has antennae, male; palpi, male; fore- and midtarsal claws unequal, male; hindtarsomere 4 with basal 5/6 white and tarsomeres 3, 5 dark, female; abdomen and genitalia, female, normal, all three spermathecae present.

(2). Bilateral gynander, specimen No. (1)-5 with associated terminalia on slide (SEAMP 345, 73/301). This specimen has right antenna, male; right palpus, male; right fore- and midtarsal claws unequal, male; right hindtarsomeres 3-5 dark, male; left antenna, female; left palpus, female; left fore- and midtarsal claws equal, female; left hindtarsomere 4 with

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basal 5/6 white and tarsomeres 3, 5 dark, female; genitalia, male, normal.

Brust (1966) gives a detailed review of gynandromorphism in mosquitoes and cites much of the literature. Since then a number of gynandromorphs have been reported. The information is generally scattered throughout the literature. At present, 34 species belonging to 10 genera have been described. Table 1 summarizes published records of gynandromorphs which were omitted from the tabulation in Brust (1966) or have been reported subsequently.

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TABLE 1. Gynandromorphs in mosquitoes (not tabulated in Brust, 1966).

Genus	Subgenus	Species	Reference
<i>Aedes</i>	<i>(Aedes)</i> <i>(Aedimorphus)</i>	<i>cinereus</i> Meigen	Brust (1966)
		<i>dentatus</i> (Theobald)	Van Someren (1969)
		<i>vexans</i> (Meigen)	Minson (1969); Horsfall <i>et al.</i> (1973)
	<i>(Finlaya)</i> <i>(Ochlerotatus)</i>	<i>togoi</i> (Theobald)	Chellappah (1965)
		<i>dorsalis</i> (Meigen)	Blakeslee, Rigby, and Bomotti (1966)
	<i>(Protomacleaya)</i> <i>(Skusea)</i> <i>(Stegomyia)</i>	<i>excrucians</i> (Walker)	Brust (1966)
		<i>triseriatus</i> (Say)	Ezenwa and Venard (1973)
		<i>pembaensis</i> Theobald	Paterson and Worth (1961)
		<i>aegypti</i> (Linnaeus)	Craig and Hickey (1967)
		<i>albopictus</i> (Skuse)	Craig and Hickey (1967)
<i>Armigeres</i> <i>Coquillettidia</i> <i>Culex</i>	<i>(Armigeres)</i> <i>(Coquillettidia)</i>	<i>giveni</i> Edwards	Colls (1958) <sup>2</sup>
		<i>perturbans</i> (Walker)	Pinger (1972) <sup>3</sup>
	<i>(Culex)</i>	<i>erythrothorax</i> Dyar	Blakeslee and Rigby (1965)
		<i>nigripalpus</i> Theobald	Meadows (1966); Taylor, Meadows and Branch (1966)
		<i>quinquefasciatus</i> Say	Meadows (1966); Seal (1966); Taylor, Meadows and Branch (1966)
		<i>salinarius</i> Coquillett	Meadows (1966); Taylor, Meadows and Branch (1966)
		<i>tarsalis</i> Coquillett	Harmston (1965, 1971); Rigby (1966); Taylor, Meadows and Branch (1966); Rosay (1968); Mitchell and Hughes (1969)
		<i>tritaeniorhynchus</i> Giles	Aslamkhan and Baker (1969)
		<i>cinereus</i> Theobald	Van Someren (1969)
		<i>inornata</i> (Williston)	Bengt (1970)
<i>Culiseta</i>	<i>(Culiseta)</i>	Dobrotworsky (1972)	
	<i>(Climacura)</i>	Lee (1967)	
<i>Trichoprosopon</i>	<i>(Trichoprosopon)</i>	<i>digitatum</i> (Rondani)	Lee (1967)

<sup>2</sup> This reference is not available. The information is from Chellappah (1965).

<sup>3</sup> Pinger (1972) reported it as an intersex. It is a gynandromorph (G. B. Craig, Jr., personal communication).

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