polytene chromosome complement was used as the standard and the zone designations followed those of Saifuddin et al. (1978).

Five paracentric inversions were observed:

(1). *In(3R)a* (Fig.1A). This inversion was found in one species A female from the village of Karan Wali approximately 100 km north of Lahore. Sympatric populations of both species A and B were present in this village and of the 811 *An. culicifacies* dissected and classified 647(79.8%) were of species A. The inversion involves zones 31 and 32 of arm 3R.

(2) *In(X)c* (Fig1B). This small inversion in zones 4 and 5 of the X-chromosome was observed in one female (n = 74) from Khizarabad approximately 33 km south of Lahore. Only species A was found in this village.

(3). *In(3L)a* (Fig.1C). This inversion on arm 3L involving zones 39 and 40 was also observed in the same female with the X inversion (above) from the village of Khizarabad.

(4). *In(2R)g* (Fig.1D). This arm 2R inversion which floats with varying frequencies in species A in Pakistan, appears to be identical with the fixed g inversion which partially differentiates species B from species A and C (Subbarao et al. 1983). It extends from the juncture of zones 14/15 to a portion of zone 16. Ten of 14 (71.4%) females from Pir Goth on the outskirts of Karachi City (1400 km south of Lahore), 1 of 161(0.6%) females from Kot Baghicha (58 km south of Lahore) and 1 of 4 (25%) females from Choa Shah (375 km north of Lahore) showed this inversion. Only species A was detected in these 3 villages.

(5). *In(2R)i* (Fig. 1E). One of 103 females from Khanke (67 km south of Lahore) was heterozygous for this arm 2R inversion. Only species A was present in this village.

Extensive surveys of field populations of species A of the taxon *An. culicifacies* have uncovered only 5 paracentric inversions; this is in contrast to the results of surveys of *An. stephensi* Liston (Mahmood and Sakai 1984) in which 16 paracentric inversions were observed.

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OBSERVATIONS ON THE RED IMPORTED FIRE ANT, *SOLENOPSIS INVICTA*, (HYMENOPTERA: FORMICIDAE) IN TREE HOLE MOSQUITO BREEDING SITES

JAMES W. SUMMERLIN[1] AND JOHN B. WELCH[2]

Red imported fire ants, *Solenopsis invicta* Buren were observed in a roadside park near Cooks Point, Burleson County, TX, in early November 1983. Mound-nest development in the park was most conspicuous at the base of trees in the lower, wetter areas. Many of the trees [American elm (*Ulmus americana* L.), water oak (*Quercus nigra* L.), post oak, (*Quercus stellata* Wang)] had developed rot holes and fork hollows that had become natural breeding sites for tree hole mosquitoes. Species found in these sites were: *Aedes triseriatus* (Say), *Anopheles barberi* Coquillett, *Orthopodomyia alba* Baker and *Orthopodomyia signifera* (Coquillett). Fire ants were observed moving up the trees and into these holes containing water and active mosquito larvae. They were observed in one rot hole 2.1 m above ground.

Twelve of 13 trees (92%) had an active *S. invicta* mound at their base and ants from these mounds were invading all active mosquito breeding sites in the trees. Some of the invading ants had formed soil-covered trails or tubes from the ground nest to the tree hole mosquito breeding sites, entered and deposited nest soil.

[1] Veterinary Toxicology and Entomology Research Laboratory, Agricultural Research Service, USDA, College Station, TX 77841.

[2] Department of Entomology, Texas A&M University, College Station, TX 77843.

Six of 10 (60%) tree holes which had been positive mosquito breeding sites in 1977 (Welch, unpublished data) were now filled with nesting soil preventing the accumulation of water and making them incapable of supporting mosquitoes. Figure 1 shows a mosquito breeding site that fire ants have begun to fill with soil.

Literature reviews indicate that ants are often found in mosquito breeding sites. Buxton and Hopkins (1927) reported that ants removed mosquito eggs from their experimental plots in Samoa. Dunn (1926) surveyed tree holes in Lagos, Nigeria, for the yellow fever mosquito. *Aedes aegypti* (L.) and noted that ants were present in 85% of the holes. These investigators did not identify the ants or give details of their behavior in these habitats. James (1966) investigating possible predators of mosquito eggs in Ontario, Canada, found that ants were the most conspicuous insects collected from experimenal plots. Three species of ants were suspected to be mosquito egg predators: *Myrma lobicornis fracticornis* Emery, *Lasius sitkaensis* Pergande, and *Componotus herculeanus* (L.). These investigations involved the sampling of semi-permanent and transient pool sites.

There are apparently no published data to document the role of ants in the regulation of mosquito populations. The predacious habits of *S. invicta* and its behavior in filling mosquito breeding sites with soil and incorporating the tree holes as nesting sites may make an important contribution to the natural control of certain tree hole mosquitoes.

Fig. 1. Mosquito breeding site that fires ants have begun to fill with soil.

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GENETICS OF RED-SPOTTED EYE IN *ANOPHELES CULICIFACIES*

KANEEZ AKHTAR AND R. K. SAKAI

International Center for Medical Research and Training; 6, A.R. Chughtai Road, Lahore, Pakistan and the International Health Program, University of Maryland School of Medicine, 10, South Pine Street, Baltimore, MD 21201.

Four sex-linked mutants have been described in species A of the taxon *Anopheles culicifacies* Giles: rose eye, *re* (Sakai et al. 1977), white eye, *w* (Sakai and Baker 1980), ventrally spaced eyes, *Vs*. (Sakai et al. 1981a) and golden body, *go* (Sakai et al. 1981b). The mutants *re* and *w* are allelic and codominant to each other but recessive to the wild type, *Vs* is dominant and lethal in males and *go* is recessive. This paper reports the genetic and linkage analyses of a new mutant, red-spotted eye, *rs*. The mutant was isolated from a gamma-irradiation-induced translocation strain, *T(Y; 2L;3)1* (Baker et al. 1978), and is characterized by red mottling in a white-eyed background. Females have darker eyes with more intense mottling than males.

The following strains were used in the crosses:

1) Sattoki—a wild type (+) laboratory strain.
2) Red-spotted eye (*rs*)—the red-spotted eye mutant strain.
3) Golden, red-spotted eye (*go/rs*).
4) Golden, rose eye, red-spotted eye (*go/re/rs*)—homozygous *re/rs* females and hemizygous *re/rs* males are phenotypically white-eyed.
5) Ventrally spaced eyes (*Vs*).

The methods of performing the crosses and the rearing and handling of the mosquitoes were as previously described (Sakai et al. 1977).

Table 1 summarizes the results of crosses