Fig. 1, 2. Light micrographs of replicas of the integument of *Scutigera* sp.: 1, head. 2, tergal plate. Total magnification X 1200.

FIREFLY CHROMOSOMES (*PHOTINUS, PHOTURIS*; LAMPIRIDAE COLEOPTERA)—Over a one year period, Professor James Lloyd of the University of Florida at Gainesville kindly collected, identified and sent to us specimens of several species of fireflies. After a considerable amount of preliminary difficulty and by employing protocols, somewhat modified, of Lewis and Riles (1960. Drosophila Information Service 34: 118-9) and Oster and Balaban (1963. Drosophila Information Service 37: 142-4), we made the following observations with adult gonadal squashes:

Two *Photinus nudermotti* Lloyd males were found to have 19 chromosomes, the smallest being the X (Fig. 1). At diakinesis, one observes 10 bodies: one large ring bivalent which probably consists of a pair of metacentrics with 2 terminal chiasmata; one smaller ring bivalent which probably is a pair of acrocentrics with 2 terminal chiasmata; 7 pairs of acrocentric bivalents each with a single terminalized chiasma; and a univalent dot which is the X chromosome. The X chromosome was not seen to be dividing. Stevens (1909. J. Exper. Zool. VI: 101-13), working with species whose correct identity cannot be known with certainty, reported that the males of both *Photinus consanguineus* and *Photuris pennsylvanica* ("Photinus pennsylvanica" of Stevens; *pennsylvanica* has since been found to be a complex of many species, Barber, 1951, Smithsonian Misc. Coll. 117, 1: 1-58) also have 19 chromosomes. Moreover, she reported that the X divides
Fig. 1. Composite drawing of 2 original photographs. Diakinesis of meiosis of adult male *Photinus macdermotti*. "X" indicates X-chromosome.

during the first meiotic division in both species and that in "*P. conana-guineus*" this occurs "very late, in a stage which is late anaphase or telophase for the other chromosomes." In view of her observations and the fact that we could not find any meiotic stages later than Metaphase I, we are not prepared to say, at this time, when the X divides in *P. macdermotti*.

One *Photurus congner* Le Conte larva, sex unknown, had 18 chromosomes. Several mitotic metaphase figures of spermatogonia (or oogonia) revealed a pair of metacentric chromosomes, a pair of submetacentric chromosomes and 14 acrocentrics. We are now repeating and extending these observations to other species in several genera. We thank Mrs. Alena Leff, Genetics Laboratory, Westchester County Medical Center, for aid with the initial histology.

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DAMAGE OF SLASH PINE FEMALE STROBILI BY REPRODUCTION WEEVILS.—Reproduction weevils are commonly associated with branch and stem debarking of pine seedlings planted in recently cutover pine-forested lands. This note documents the occurrence of these weevils in the crowns of larger trees and their damage to pine strobili.

On 23 February 1982, I observed 2 reproduction weevils feeding on the female strobili of a 15 year old slash pine, *Pinus elliottii* Engelm., in a seed orchard located in Munson, FL. The weevils were an adult ♀ pales weevil, *Hylobius pales* (Herbst), and a ♀ pitch-eating weevil, *Pachylobius picivorus* (Germar). Both weevils were collected from the upper crown of the host tree (ca. 11 m high).

A slash pine female strobilus and a flower stalk exhibited similar damage: circular to linear excavation of plant tissue by the weevils (Fig. 1). Pales weevils caused similar damages to Scots pine, *Pinus sylvestris* L., in the Lake States (J. A. Corneil, pers. comm.). Contribution No. 542, Bureau of Entomology, Division of Plant Industry, P. O. Box 1289, Gainesville, FL 32602, USA—W. N. DIXON, Forest Entomologist, Division of Forestry, Gainesville, FL 32602.