NEW HOST PLANT RECORDS FOR THE STINK BUG
PIEZODORUS GUILDINII IN FLORIDA
(HEMIPTERA: PENTATOMIDAE)

A. R. Panizzi¹ AND F. Slansky JR.
Department of Entomology and Nematology
Institute of Food and Agricultural Sciences
University of Florida
Gainesville, Florida 32611

Piezodorus guildinii (Westwood) is a neotropical pentatomid that occurs from the southern United States to Argentina. This species is a serious pest of soybean throughout South America, particularly in Brazil (summarized in Panizzi and Slansky 1985a). It was commonly found on soybean during 1983 in north-central Florida (A. R. Panizzi, unpublished observations), where its abundance in the past few years seems to have increased (Menezes 1981), suggesting that it potentially could become a serious soybean pest in Florida.

P. guildinii is polyphagous; reported host plants include a number of wild and cultivated species, many of which are legumes (e.g., alfalfa, lentil, green bean and soybean; summarized in Panizzi and Slansky 1985a). However, some of these plants may only provide a substrate for resting or refuge and may not actually be host plants. We found eggs, nymphs and adults of P. guildinii on 3 apparently unreported host plants during November and December, 1983 in Alachua County, Florida. These plants were: Indigofera hirsuta L., Crotalaria lanceolata E. Mey., and Crotalaria brevidens Benth.

On the first two species, egg masses were observed on pods; nymphs (1st through 5th instars) and adults were found most frequently feeding and/or basking on pods. Late instar nymphs and adults would hide among the pods when disturbed, and as many as 20 individuals were found on a single host plant. On the third species, only one 5th instar nymph was found (feeding on a pod).

Subsequent research on adult biology of P. guildinii (Panizzi and Slansky 1985b) indicated that pods of I. hirsuta, and to a lesser extent C. lanceolata (C. brevidens was not included in our study) allow early oviposition and increased fecundity compared to adults fed raw shelled peanuts, dry soybean seeds or green (snap) beans. We successfully reared nymphs on I. hirsuta pods but high mortality occurred when reared on green beans (the latter are commonly used as a suitable laboratory food for another polyphagous stink bug, Nezara viridula (L.); Harris and Todd 1980).

The broad host plant range of P. guildinii indicates that a number of wild plant species could serve to maintain its populations when cultivated host plants are unavailable, and provide sources from which colonization of soybean and other cultivated hosts occurs. In Brazil, P. guildinii has been recorded on an unspecified species of Crotalaria (Monte 1939). In Colombia,

¹Present address: Centro Nacional de Pesquisa de Soja, EMBRAPA, Caixa Postal 1061, Londrina, PR, 86100, Brasil.
_I. hirsuta_ and _Crotalaria pallida_ Aiton apparently serve as sources of _P. guildinii_ attacking soybean (Hallman 1979). Because _I. hirsuta_ and _C. lanceolata_ are commonly found in Alachua County, they could be two important wild host plants of _P. guildinii_ in the fall in this area. Florida Agricultural Experiment Station Journal Series No. 5720. We thank D. Hall for identifying the plants, and D. Herzog, S. Passoa and R. Sailer for reviewing an early draft of this note.

**REFERENCES CITED**


---

**MATING BY KLEPTOPARASITIC FLIES (DIPTERA: CHLOROPIDAE) ON A SPIDER HOST**

**John Sivinski**

Insect Attractants, Behavior, and Basic Biology Research Laboratory, Agricultural Research Service, U. S. Department of Agriculture, Gainesville, Florida 32604

Some small Diptera are kleptoparasites (food thieves) of spiders and other predaceous arthropods. These rarely encountered flies are nearly always female (Table 1). It has been suggested that males, particularly those of phoretic species, are absent not only because of possibly different feeding habits, but also because of sexual tactics (Sivinski and Stowe 1980). That is, the probability of successfully anticipating the arrival of a rare female fly on or in the vicinity of any one of the relatively more abundant hosts is so low that males are constrained to participate in off-host mating systems such as swarming/lickling and patrolling of emergence sites. However, should fly density increase, then waiting or searching at hosts might become a profitable means of finding mates (see discussion of on-host mating in haematophagous Diptera in Sivinski 1984). It is of interest then, that for apparently the first time, on-host kleptoparasite copulations have been observed and that these occurred in a very dense “infestation” of flies.
PIEZODORUS GUILDINII IN FLORIDA
(HEMIPTERA: PENTATOMIDAE)

A. R. PANIZZI and F. SLANSKY JR.
Department of Entomology and Nematology
Institute of Food and Agricultural Sciences
University of Florida
Gainesville, Florida 32611

Piezodorus guildinii (Westwood) is a neotropical pentatomid that occurs from the southern United States to Argentina. This species is a serious pest of soybean throughout South America, particularly in Brazil (summarized in Panizzi and Slansky 1985a). It was commonly found on soybean during 1983 in north-central Florida (A. R. Panizzi, unpublished observations), where its abundance in the past few years seems to have increased (Menezes 1981), suggesting that it potentially could become a serious soybean pest in Florida.

P. guildinii is polyphagous; reported host plants include a number of wild and cultivated species, many of which are legumes (e.g., alfalfa, lentil, green bean and soybean; summarized in Panizzi and Slansky 1985a). However, some of these plants may only provide a substrate for resting or refuge and may not actually be host plants. We found eggs, nymphs and adults of P. guildinii on 3 apparently unreported host plants during November and December, 1983 in Alachua County, Florida. These plants were: Indigofera hirsuta L., Crotalaria lanceolata E. Mey., and Crotalaria brevidens Benth.

On the first two species, egg masses were observed on pods; nymphs (1st through 5th instars) and adults were found most frequently feeding and/or basking on pods. Late instar nymphs and adults would hide among the pods when disturbed, and as many as 20 individuals were found on a single host plant. On the third species, only one 5th instar nymph was found (feeding on a pod).

Subsequent research on adult biology of P. guildinii (Panizzi and Slansky 1985b) indicated that pods of I. hirsuta, and to a lesser extent C. lanceolata (C. brevidens was not included in our study) allow early oviposition and increased fecundity compared to adults fed raw shelled peanuts, dry soybean seeds or green (snap) beans. We successfully reared nymphs on I. hirsuta pods but high mortality occurred when reared on green beans (the latter are commonly used as a suitable laboratory food for another polyphagous stink bug, Nezara viridula (L.); Harris and Todd 1980).

The broad host plant range of P. guildinii indicates that a number of wild plant species could serve to maintain its populations when cultivated host plants are unavailable, and provide sources from which colonization of soybean and other cultivated hosts occurs. In Brazil, P. guildinii has been recorded on an unspecified species of Crotalaria (Monte 1939). In Colombia,

---

1Present address: Centro Nacional de Pesquisa de Soja, EMBRAPA, Caixa Postal 1061, Londrina, PR, 86100, Brasil.
I. hirsuta and Crotalaria pallida Aiton apparently serve as sources of P.
guildinii attacking soybean (Hallman 1979). Because I. hirsuta and C.
lanceolata are commonly found in Alachua County, they could be two im-
portant wild host plants of P. guildinii in the fall in this area. Florida
Agricultural Experiment Station Journal Series No. 5720. We thank D. Hall
for identifying the plants, and D. Herzog, S. Passoa and R. Sailer for re-
viewing an early draft of this note.

REFERENCES CITED

HALLMAN, G. 1979. Importancia de algunas relaciones naturales plantas-
arthropodos en la agricultura de la zona calida del Tolima Central.

HARRIS, V. E., AND J. W. TODD. 1980. Duration of the immature stages of
the southern green stink bug, Nezara viridula (L.), with a compara-

MENEZES, E. D. 1981. Population dynamics of the stink bug (Hemiptera:
Pentatomidae) complex on soybean and comparison of two relative
259 pp.

MONTE, O. 1939. Hemipteros fitófagos. IV-V. Pentatomidac. O Campo 10:
51-56.

PANIZZI, A. R., AND F. SLANESKY JR. 1985a. Review of phytophagous penta-
tomids (Hemiptera: Pentatomidae) associated with soybean in the
Americas Fl. Entomol. 68. 000-000.

PANIZZI, A. R., AND F. SLANESKY JR. 1985b. Legume host impact on per-
formance of adult Piezodorus guildinii (Westwood) (Hemiptera:

MATING BY KLEPTOPARASITIC FLIES
(Diptera: Chloropidae) ON A SPIDER HOST

JOHN SIVINSKI

Insect Attractants, Behavior, and Basic Biology Research Laboratory,
Agricultural Research Service, U. S. Department of Agriculture,
Gainesville, Florida 32604

Some small Diptera are kleptoparasites (food thieves) of spiders and
other predaceous arthropods. These rarely encountered flies are nearly
always female (Table 1). It has been suggested that males, particularly
those of phoretic species, are absent not only because of possibly different
feeding habits, but also because of sexual tactics (Sivinski and Stowe 1980).
That is, the probability of successfully anticipating the arrival of a rare
female fly on or in the vicinity of any one of the relatively more abundant
hosts is so low that males are constrained to participate in off-host mating
systems such as swarming/leckling and patrolling of emergence sites. How-
ever, should fly density increase, then waiting or searching at hosts might
become a profitable means of finding mates (see discussion of on-host mating
in haemotophagous Diptera in Sivinski 1984). It is of interest then, that for
apparently the first time, on-host kleptoparasite copulations have been ob-
served and that these occurred in a very dense “infestation” of flies.