

caterpillars of some Lepidoptera, which often result in severe defoliation, are considered to be adaptations to food plant resources having very patchy distributions and therefore present in very limited supply (e.g., Tsubaki & Shiotsu, 1982, *Oecologia* 55:12–20; Fitzgerald & Peterson, 1983, *Anim. Behav.* 31:417–423). At least one temperate-zone species of *Schizura* is polyphagous (Ferguson, 1975, U.S.D.A. Tech. Bull. No. 1521) and the possibility of such a habit being shared with *S. rustica* in Costa Rica cannot be ruled out. Both monophagous and polyphagous notodontids are known from the Neotropical Region (Seitz, 1907, *Macrolepidoptera of the World*, Stuttgart, A. Kernan). And, aside from the recent report of the notodontid *Lirimiris meridionalis* (Schaus), there are no other published accounts of Neotropical notodontids being associated with Sterculiaceae, and the present reports add a second genus and species to our knowledge of such associations. Given the close evolutionary affinities of *Theobroma* and *Herrania* (Cuatrecasas, op. cit.), the observed interchangeability of leaves from both trees to later instars of *S. rustica* is not a surprising or unexpected finding. Yet, in nature, other factors associated with the trees may select for egg-placement by this notodontid to be primarily a response to *Herrania*, a genus whose member species have leaf configurations and general tree profiles quite different from various *Theobroma*, including *T. cacao*. Noteworthy in this context is the fact that *S. rustica* was found only on *H. albiflora*, in spite of the fact that a handful of *Herrania* trees was surrounded by thousands of *T. cacao* ("cocoa") trees in a plantation setting.

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FOOD-PLANTS OF THE PIERIDAE

After studying the correspondence between Messrs. Philip James DeVries and Allen M. Young (1982, *J. Lepid. Soc.* 36(3):299–232), it occurs to me that a general look at the food-plant preferences of the Pieridae, taken region by region, may be of interest.

AFRICA

Pseudopontiinae—No information.

Coliadini

Catopsilia—*Cassia* (Caesalpiniaceae), *Sesbania* (Papilionaceae), a somewhat dubious record of *Gossypium* (Malvaceae).

Colias—*Cassia* (Caesalpiniaceae), *Medicago*, *Phaseolus*, *Sesbania* (Papilionaceae), *Oxalis* (Oxalidaceae), a somewhat doubtful record of *Ricinus* (Euphorbiaceae).

Eurema—*Cassia* (Caesalpiniaceae), *Hypericum* (Hypericaceae), *Acacia*, *Albizzia*, *Entada*, *Parkia*, *Dichrostachys* (Mimosaceae), *Aeschynome*, *Lespedeza*, *Sesbania* (Papilionaceae).

Euchloini

Pinacopteryx—*Boscia*, *Cadaba*, *Capparis*, *Maerua* (Capparidaceae).

Euchloe—*Barbarea*, *Iberis*, *Sisymbrium*, etc. (Cruciferae).

Pierinae

Nepheronia—*Ritcheia* (Capparidaceae), *Hippocratea* (Hippocrataceae), *Cassiporrea* (Rhizophoraceae), *Azima*, *Salvadora* (Salvadoraceae).

- Eronia*—*Capparis* (Capparidaceae), *Salvadora* (Salvadoraceae).
Colotis—*Boscia*, *Cadaba*, *Capparis*, *Maerua*, *Ritchiea* (Capparidaceae) (some species eating both groups, some one only). A very dubious record of "dwarf bamboo in captivity."
Calopteris—No records.
Gideona—No records.
Belenois—*Rhus* (Anacardiaceae) (one species only), *Boscia*, *Capparis*, *Cleome*, *Maerua*, *Ritchiea* (Capparidaceae), *Brassica* (Cruciferae), *Salvadora* (Salvadoraceae), a very doubtful record of *Solanum* (Solanaceae).
Pieris—*Brassica* (Cruciferae).
Pontia—*Alyssum*, *Brassica*, *Erucastrum*, *Lepideum*, *Sisymbrium* (Cruciferae), *Caylusia*, *Ochradenum*, *Reseda* (Resedaceae), a dubious record of *Solanum* (Solanaceae).
Dixeia—*Capparis* (Capparidaceae).
Appias—*Boscia*, *Capparis*, *Maerua*, *Ritchiea* (Capparidaceae), *Drypetes*, *Phyllanthus* (Euphorbiaceae).
Mylothris—*Loranthus*, *Viscum* (Loranthaceae), *Osyris* (Santalaceae) (one species along with *Loranthus*), *Hevea* (Euphorbiaceae), *Theobromum* (Sterculiaceae) (one species along with *Loranthus*), one species completely anomalous on *Polygonum* (Polygonaceae).
Leptosia—*Capparis* (Capparidaceae).

ASIA (mainly India) and AUSTRALIA

Coliadini

- Catopsilia*—*Bauhinia*, *Cassia* (Caesalpiniaceae), *Butea* (Papilionaceae).
Dercas—No records.
Gonepteryx—*Rhamnus* (Rhamnaceae), *Vaccinium* (Ericaceae) (rarely).
Gandaca—No records.
Eurema—*Caesalpinia*, *Cassia*, *Delonix*, *Wagatea* (Caesalpiniaceae), *Indigofera*, *Sesbania* (Papilionaceae). Also in Australia: *Breynia*, *Phyllanthus* (Euphorbiaceae), *Albizzia*, *Leucaena*, *Pithecolobium* (Mimosaceae).
Colias—*Astragalus*, *Oxytropis*, *Parochetus*, *Trifolium* (Papilionaceae).

Euchloeini

- Euchloe*—Cruciferae spp.

Pierini

- Leptosia*—*Capparis*, *Crataeva* (Capparidaceae).
Aporia—*Berberis* (Berberidaceae), Prunaceae spp., Rubiaceae spp.
Delias—*Loranthus* (Loranthaceae), *Nauclea* (Rubiaceae), *Averrhoa* (Geraniaceae) (both the latter with the remark that the food-plant is more likely to be *Loranthus* growing thereon).
Cepora—*Capparis* (Capparidaceae).
Prioneris—*Capparis* (Capparidaceae).
Anapheis—*Capparis* (Capparidaceae).
Appias—*Capparis*, *Crataeva* (Capparidaceae), *Hemicyclia* (Euphorbiaceae).
Pontia—*Reseda* (Resedaceae), *Sinapis*, *Sisymbrium*, *Turritia* (Cruciferae).
Ixias—*Capparis* (Capparidaceae).
Colotis—*Cadaba*, *Capparis*, *Maerua* (Capparidaceae), *Azima*, *Salvadora* (Salvadoraceae).
Hebomoia—*Capparis*, *Crataeva* (Capparidaceae).
Valeria—*Capparis* (Capparidaceae).

EUROPE

Coliadini

- Catopsilia*—*Cassia* (Caesalpiniaceae).
Colias—*Cistus* (Cistaceae), *Vaccinium* (Ericaceae), *Astragalus*, *Coronilla*, *Medicago*, *Trifolium*, *Vicia* (Papilionaceae).
Gonepteryx—*Rhamnus* (Rhamnaceae).

Euchloeini

Euchloe—*Barbarea*, *Biscutella*, *Ineris*, *Sisymbrium* (Cruciferae).

Anthocharis—*Biscutella*, *Cardamines*, *Sisymbrium*, etc. (Cruciferae).

Pierini

Aporia—*Crataegus*, *Prunus*, *Spiraea* (Rosaceae).

Pieris—*Aethionema*, *Alyssum*, *Brassica*, *Iberis*, *Sinapis*, *Sisymbrium* (Cruciferae),
Tropaeolum (Geraniaceae), *Reseda* (Resedaceae).

Colotis—*Capparis* (Capparidaceae).

Zegris—*Sinapis* (Cruciferae).

Leptidea—*Cracca*, *Lathyrus*, *Lotus*, *Vicia* (Papilionaceae).

NORTH AMERICA (after Ehrlich & Ehrlich's "How to Know the Butterflies")

Coliadini

Nathalis—*Stellaria* (Caryophyllaceae), *Bidens*, *Dyssodia*, *Tagetes* (Compositae), *Erodium* (Geraniaceae), *Helenium* (??).

Colias—*Vaccinium* (Ericaceae), *Amorpha*, *Astragalus*, *Hedysarum*, *Medicago*, *Parosela* (Papilionaceae), *Salix* (Salicaceae).

Kricogonia—No records.

Eurema—*Cassia* (Caesalpiniaceae), perhaps *Astragalus* (Papilionaceae) and others.

Phoebis—*Cassia* (Caesalpiniaceae).

Euchloeini

Anthocharis—*Arabis*, *Barbarea*, *Cardamines*, *Sisymbrium* (Cruciferae).

Euchloe—*Arabis*, *Sisymbrium*, etc. (Cruciferae).

Pierini

Pieris—*Dentaria*, *Isomeria*, *Stanleya*, other Cruciferae and Capparidaceae.

Ascia—*Brassica*, *Cleome*, *Polanisia*, other Cruciferae and Capparidaceae.

Neophastia—*Pinus* (Coniferae).

Unfortunately, I have no records for South America.

Looking at the foregoing lists as a whole, a fairly coherent pattern emerges. The Coliadini are almost entirely confined to the leguminous subfamilies Papilionaceae and Caesalpiniaceae, with *Gonepteryx* confined to the Rhamnaceae. The other pierine tribes show a decided preference for plants containing mustard oil glucosides, i.e., Cruciferae, Capparidaceae and Salvadoraceae but with a few divergent groups or species; for example, *Delias* and *Mylothris* feeding mainly on Loranthaceae and *Aporia* on Rosaceae, Rubiaceae and Berberidaceae, among others. I am unable to trace any record for Lauraceae apart from Mr. Young's, and, although that does not completely preclude the family as a pierine food-plant, it makes it less likely.

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ANTHOCHARIS LANCEOLATA (PIERIDAE) FEEDING ON A RARE
ENDEMIC STREPTANTHUS SPECIES (CRUCIFERAE)

Anthocharis lanceolata Lucas is recorded on several species of *Arabis* (Cruciferae) in various parts of its range. On 14 July 1983 it was found infesting the rare endemic *Streptanthus howellii* Wats. about 10 km southwest of O'Brien, Josephine County, Oregon. The plants are on and adjacent to a disturbed roadside and power-line cut on a serpentine substrate and are confined to otherwise bare or nearly bare soil. Including