

Nectar Sources of Day-Flying Lepidoptera of Central Illinois

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ABSTRACT We tabulated flowering plant species visited by 98 species of Lepidoptera as extracted from records of C. Robertson, who observed >15,000 insect visitors of flowering plants in central Illinois during a 33-yr period. Diversity of Lepidoptera was highest on plant species of the Asclepiadaceae and Verbenaceae, and the greatest number of lepidopteran species visited *Verbena stricta* Ventenat (Verbenaceae), *Aster pilosus* Willdenow (Asteraceae), *Cephalanthus occidentalis* L. (Rubiaceae), and *Pycnanthemum flexuosum* (Walter) Britton, Sterns, Poggenberg (Lamiaceae). Lepidopterans were particularly abundant on *A. pilosus* and *C. occidentalis*. The most polyphagous lepidopteran species were *Colias philodice* Godart (Pieridae), *Danaus plexippus* (L.) (Danaiidae), *Artogeia rapae* (L.) [= *Pieris rapae* (L.); Pieridae], *Phyciodes tharos* (Drury) (Nymphalidae), *Polites themistocles* (Latreille) (Hesperiidae), *Pontia protodice* (Boisduval & LeConte) (Pieridae), and *Everes comyntas* (Godart) (Lycaenidae), each of which visited flowers of 50 or more plant species. *Colias philodice*, *Phyciodes tharos*, and *Pontia protodice* were the most common species. Most lepidopteran species evidently visited a limited range of nectar plants, which may have implications for species conservation and selecting “butterfly plants” for gardening.

KEY WORDS moth, skipper, butterfly, flower, prairie, pollination

ADULT LEPIDOPTERANS VISIT flowering plants to feed on nectar and, in some cases, pollen, resources that power flight in locating mates and host plants for oviposition and, for pollen-feeders, contribute at least in part to egg production (Saunders 1932, Norris 1934, Gilbert 1972, Dunlap-Pianka et al. 1977, Opler and Krizek 1984, Karlsson 1994, Allen 1997). In fact, food sources of adult lepidopterans can be as important as larval hosts in the conservation of some lepidopteran species (Opler and Krizek 1984). Nevertheless, host plant associations of adult lepidopterans have received short shrift in the literature (e.g., Holland 1903, Saunders 1932, Opler and Krizek 1984, Allen 1997, Opler 1998, Pyle 1998), although hosts have been well documented for a few species (Lazri and Barrows 1984, Jackson 1987).

In this article, we updated and analyzed information on host plant associations of adult lepidopterans originally presented by Robertson (1928) who documented, over a 33-yr period, 15,172 insects visiting flowers of 453 plant species in the vicinity of Carlinville, IL, “. . . for the purpose of ascertaining the different kinds of insect visitors.” (See Tooker and Hanks [2000] for information on hymenopteran parasitoids from this data set.) The value of Robertson’s data, however, has been limited because his records are arranged by plant species with no index to insect species, making it difficult to evaluate host ranges. We have made these data more accessible by listing nec-

taring host species for each of the lepidopteran species that Robertson recorded, and by updating all scientific names. We have also assessed the diversity and abundance of lepidopteran species per plant species and families, differences between lepidopteran families in preference for particular plant species, as well as the level of polyphagy and relative abundance of lepidopteran species.

Materials and Methods

We updated lepidopteran species names and taxonomic affiliations using the Check List of Lepidoptera of America North of Mexico (Hodges et al. 1983). Plant species names were updated with the latest edition (Fernald 1978) of Robertson’s original reference (Robinson and Fernald 1908) and a more recent reference (Kartesz 1994).

Our analysis of Robertson’s data were hindered by a lack of information on his methods; however, we have been able to glean some details from the short introduction of his book (Robertson 1928), a biography written after his death (Parks 1936), and a report addressing his data on bees (Marlin and LaBerge 2001). Robertson worked from early spring to late fall, often concentrating on visitors to plant species that bloomed for only a short period of time (Parks 1936). Each day he appears to have collected from only a few species of plants (Marlin and LaBerge 2001). He does not appear to have collected exhaustively, but rather made note of all the visitors and collected selectively

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for a reference collection, concentrating on rarer species or those whose taxonomic status was uncertain (Marlin and LaBerge 2001). Poor representation of moth families in his records suggests that he made his observations primarily during the day. Robertson (1928) provided a qualitative index of abundance by indicating which lepidopteran species were "abundant" or "frequent" on particular plant species. Robertson observed visitors making note of certain activities (e.g., collecting pollen, sucking on nectar, in copula; Robertson 1928) and the sex of the insect species when possible.

Using Robertson's data, we ranked the following: (1) species diversity of lepidopterans per plant species, (2) abundance of lepidopteran species per plant species, (3) polyphagy of lepidopterans species at the species and families levels, and (4) relative abundance of lepidopteran species. We determined whether lepidopteran families differed in the plant species they favored by ranking the proportion of their species that visited the 15 most preferred plant species and testing differences between these ranks with the nonparametric Kruskal-Wallis test (PROC NPARIWAY, SAS Institute 1988) and pair-wise correlations (PROC CORR, SAS Institute 1988).

Results and Discussion

Robertson recorded Lepidoptera from 244 species of flowering plants of 53 families (Table 1). Of these plants, 64 species (26.2%) were of the Asteraceae, 20 of the Fabaceae (8.2%), 19 of the Lamiaceae (7.8%), 13 of the Rosaceae (5.3%), and 11 of the Apiaceae (4.5%); the remaining plant families were represented by nine or fewer species (<4%).

Among the 98 lepidopteran species recorded from flowers, hesperiids were best represented with 26 species (Table 2), followed by nymphalids (16 species), noctuids (13 species), lycaenids (10 species), and pierids (eight species); the remaining lepidopteran families were represented by six or fewer species, including single species of Danaidae, Libytheidae, and Zygaenidae. This pattern in diversity is consistent with contemporary assessments of the number of lepidopteran species per family in central Illinois (Covell 1984, Opler and Krizek 1984, Sedman and Hess 1985, Bouseman and Sternburg 2001).

Plant species visited by the greatest number of lepidopteran species (29–30 species) included *Verbena stricta* Ventenat (Verbenaceae), *Cephalanthus occidentalis* L. (Rubiaceae), *Pycnanthemum flexuosum* (Walter) Britton, Sterns, Poggenberg (Lamiaceae), and *Aster pilosus* Willdenow (Asteraceae) (Table 3). Lepidopteran species probably preferred the flowers of these plant species because florets are tightly clustered and have short corolla tubes, providing easy access to nectar (Opler and Krizek 1984, Jervis et al. 1993, Zomlefer 1994). Moreover, flowers of these species are pink or white, the colors preferred by lepidopterans in general (Saunders 1932, Opler and Krizek 1984). Other plant species that were preferred by lepidopteran species had flowers of similar mor-

phology and ranged from white to yellow to pink (Table 3), including four species of Asclepiadaceae, three species of Asteraceae, two species of Fabaceae, and single species of Boraginaceae, Lamiaceae, and Apiaceae.

The number of lepidopteran species that Robertson recorded from plant species could have been a consequence of the abundance of plant species: he may have sampled very abundant plant species more intensively than rarer plants. In fact, the six plant species associated with the greatest diversity of visitors (*V. stricta*, *A. pilosus*, *C. occidentalis*, *P. flexuosum*, *Asclepias syriaca* L., and *Monarda fistulosa* L.; Table 3) all appear to have been common in Illinois at the time that Robertson made his observations (Illinois Natural History Survey 1936, Jones 1945), and remain common today (Mohlenbrock 1986). Nevertheless, other abundant plant species were visited by only three or fewer species of Lepidoptera (e.g., *Gnaphalium obtusifolium* L., *Aster lateriflorus* [L.], and *Euphorbia corollata* L.; Table 2; Illinois Natural History Survey 1936, Jones 1945). Therefore, foraging preferences of lepidopterans, rather than abundance of plant species, evidently are at least partly responsible for patterns of floral visitation that we report.

Among plant families represented by at least five species of plants in Robertson's records, the number of lepidopteran species per plant species was highest in Asclepiadaceae, with an average of 16.6 lepidopteran species (Table 2), followed by Verbenaceae (8.9 species), Lamiaceae (7.8 species), Asteraceae (7.7 species), Apiaceae (5.9 species), Fabaceae (4.6 species), and Rosaceae (4.3 species); plant species of the remaining families were visited by an average of one to four lepidopteran species. These patterns in diversity of lepidopterans are consistent with lepidopteran preferences in floral morphology and color: Asclepiadaceae, Verbenaceae, Lamiaceae, Asteraceae, and Apiaceae typically have clustered flowers with relatively short corollas that range in color from yellow to white to pink (Opler and Krizek 1984, Jervis et al. 1993, Zomlefer 1994).

Lepidopteran families differed significantly in the proportion of their species that visited the 15 most preferred plant species (Table 3; Kruskal-Wallis statistic = 36.4; $P < 0.0001$). These differences in preference were not explained by fidelity to particular plant families or flower colors, but could be related to similarities in flower height, flower size, floral scent, or the types of sugars, amino acids, or lipids in nectar (Faegri and van der Pijl 1979, Baker 1983, Opler and Krizek 1984). Preference rankings of different families were not correlated ($P > 0.05$) except for an inverse correlation between ranks of lycaenids and papilionids (Pearson's $r = -0.65$; $P = 0.0087$), perhaps because they differ dramatically in adult body size and therefore may prefer to feed in flowers of different morphologies.

Lepidoptera were particularly abundant (based on Robertson's "frequent" and "abundant" assessments) on two of the 15 most preferred plant species (Table 2): *C. occidentalis* (with seven lepidopteran species

Table 1. Plant species from which lepidopteran adults were collected by Robertson (1928)

Current plant species name	Species name cited (if different from current)	Species code	Family	No. of Lepidoptera spp. collected
<i>Abutilon theophrasti</i> Medicus	—	<i>Abuthe</i>	Malvaceae	3
<i>Acer saccharum</i> Marshall	—	<i>Acesac</i>	Aceraceae	3
<i>Agalinis tenuifolia</i> (Vahl) Rafinesque-Schmaltz	<i>Gerardia tenuifolia</i>	<i>Agaten</i>	Scrophulariaceae	2
<i>Agastache nepetoides</i> (L.) Kuntze	—	<i>Aganep</i>	Lamiaceae	2
<i>Ageratina altissima</i> var. <i>roanensis</i> (Small) Clewell	<i>Eupatorium urticaefolium</i>	<i>Agealt</i>	Asteraceae	2
<i>Ammannia coccinea</i> Rottboell	—	<i>Ammcoc</i>	Lythraceae	3
<i>Antennaria plantaginifolia</i> (L.) Richardson	—	<i>Antpla</i>	Asteraceae	7
<i>Apocynum cannabinum</i> L.	—	<i>Apocan</i>	Apocynaceae	2
<i>Arctium minus</i> Bernhadi	—	<i>Arcmin</i>	Asteraceae	4
<i>Arnoglossum muehlenbergii</i> (C. H. Schultz) H. E. Robinson	<i>Cacalia reniformis</i>	<i>Arnmue</i>	Asteraceae	1
<i>Arnoglossum plantagineum</i> Rafinesque-Schmaltz	<i>Cacalia tuberosa</i>	<i>Arnpla</i>	Asteraceae	2
<i>Asclepias incarnata</i> L.	—	<i>Ascinc</i>	Asclepiadaceae	21
<i>Asclepias longifolia</i> Michaux	<i>Acerates floridana</i>	<i>Asclon</i>	Asclepiadaceae	2
<i>Asclepias purpurascens</i> L.	—	<i>Ascpur</i>	Asclepiadaceae	21
<i>Asclepias sullivantii</i> Engelm. ex Gray	—	<i>Ascsul</i>	Asclepiadaceae	19
<i>Asclepias syriaca</i> L.	—	<i>Ascsyr</i>	Asclepiadaceae	23
<i>Asclepias tuberosa</i> L.	—	<i>Asctub</i>	Asclepiadaceae	14
<i>Asclepias verticillata</i> L.	—	<i>Ascver</i>	Asclepiadaceae	16
<i>Aster anomalus</i> Engelm.	—	<i>Astano</i>	Asteraceae	5
<i>Aster cordifolius</i> var. <i>sagittifolius</i> (Wedemeyer ex Willdenow) A. G. Jones	<i>A. salicifolius</i> , <i>A. sagittifolius</i>	<i>Astcor</i>	Asteraceae	8,3
<i>Aster ericoides</i> L.	<i>A. multiflorus</i>	<i>Asteri</i>	Asteraceae	2
<i>Aster lanceolatus</i> Willdenow	<i>A. paniculatus</i>	<i>Astlan</i>	Asteraceae	12
<i>Aster lateriflorus</i> (L.) Britton	—	<i>Astlat</i>	Asteraceae	2
<i>Aster novae-angliae</i> L.	<i>A. novaeangliae</i>	<i>Astnov</i>	Asteraceae	10
<i>Aster pilosus</i> Willdenow	<i>A. ericoides villosus</i>	<i>Astpil</i>	Asteraceae	30
<i>Aster turbinellus</i> Lindley	—	<i>Asttur</i>	Asteraceae	2
<i>Astragalus canadensis</i> L.	—	<i>Astcan</i>	Fabaceae	1
<i>Astragalus crassicaulis</i> var. <i>berlandieri</i> Barneby	<i>A. mexicanus</i>	<i>Astcra</i>	Fabaceae	4
<i>Baptisia alba</i> var. <i>macrophylla</i> (Larisey) Isely	<i>B. leucantha</i>	<i>Bapalb</i>	Fabaceae	1
<i>Bidens aristosa</i> (Michaux) Britton	—	<i>Bidari</i>	Asteraceae	15
<i>Bidens bipinnata</i> L.	—	<i>Bidbip</i>	Asteraceae	1
<i>Bidens frondosa</i> L.	—	<i>Bidfro</i>	Asteraceae	1
<i>Bidens laevis</i> (L.) Britton, Sterns, Poggenberg	—	<i>Bidlae</i>	Asteraceae	14
<i>Blephilia ciliata</i> (L.) Benth	—	<i>Blecl</i>	Lamiaceae	14
<i>Blephilia hirsuta</i> (Pursh) Benth	—	<i>Blehir</i>	Lamiaceae	12
<i>Boltonia asteroides</i> (L.) L'Heritier De Brutelle	—	<i>Bolast</i>	Asteraceae	20
<i>Camassia scilloides</i> (Rafinesque-Schmaltz) Cory	<i>C. esculenta</i>	<i>Camsci</i>	Liliaceae	5
<i>Campanulastrum americanum</i> (L.) Small	<i>Campanula americana</i>	<i>Camame</i>	Campanulaceae	2
<i>Capsella bursa-pastoris</i> (L.) Medicus	—	<i>Capbur</i>	Brassicaceae	6
<i>Cardamine bulbosa</i> (Schreber ex Muhlenberg) Britton, Sterns, Poggenberg	—	<i>Carbul</i>	Brassicaceae	8
<i>Cardamine concatenata</i> (Michaux) Swartz	<i>Dentaria laciniata</i>	<i>Carcon</i>	Brassicaceae	2
<i>Ceanothus americanus</i> L.	—	<i>Ceaame</i>	Rhamnaceae	2
<i>Cephalanthus occidentalis</i> L.	—	<i>Cepocc</i>	Rubiaceae	29
<i>Cerastium nutans</i> Rafinesque-Schmaltz	—	<i>Cernut</i>	Caryophyllaceae	2
<i>Cercis canadensis</i> L.	—	<i>Cercan</i>	Fabaceae	5
<i>Cicuta maculata</i> L.	—	<i>Cicmac</i>	Apiaceae	8
<i>Cirsium altissimum</i> (L.) Hill	—	<i>Ciralt</i>	Asteraceae	8
<i>Cirsium discolor</i> (Muhlenberg ex Willdenow) Sprengel	—	<i>Cirdis</i>	Asteraceae	9
<i>Cirsium pumilum</i> (Nuttall) Sprengel	—	<i>Cirpum</i>	Asteraceae	9
<i>Cirsium vulgare</i> (Savi) Tenore	<i>C. lanceolatum</i>	<i>Cirvul</i>	Asteraceae	14
<i>Claytonia virginica</i> L.	—	<i>Clavir</i>	Portulacaceae	9
<i>Clematis virginiana</i> L.	—	<i>Clevir</i>	Ranunculaceae	1
<i>Collinsia verna</i> Nuttall	—	<i>Colver</i>	Scrophulariaceae	4
<i>Comandra umbellata</i> (L.) Nuttall	—	<i>Comumb</i>	Santalaceae	2
<i>Coreopsis palmata</i> Nuttall	—	<i>Corpal</i>	Asteraceae	14
<i>Coreopsis tripteris</i> L.	—	<i>Cortri</i>	Asteraceae	3
<i>Cornus amomum</i> P. Miller	—	<i>Coramo</i>	Comaceae	16
<i>Cornus florida</i> L.	—	<i>Corflo</i>	Comaceae	1
<i>Cornus racemosa</i> Lamarck	<i>C. paniculata</i>	<i>Corrac</i>	Comaceae	2
<i>Crataegus chrysoarpa</i> Ashe	<i>C. coccinea</i>	<i>Chrchr</i>	Rosaceae	2
<i>Crataegus crus-galli</i> L.	—	<i>Cracru</i>	Rosaceae	3
<i>Crataegus mollis</i> Scheele	—	<i>Cramol</i>	Rosaceae	1
<i>Crotalaria sagittalis</i> L.	—	<i>Crosag</i>	Fabaceae	2
<i>Dalea candida</i> Willdenow	<i>Petalostemum candidum</i>	<i>Dalcan</i>	Fabaceae	1
<i>Dalea purpurea</i> Ventenat	<i>Petalostemum purpureum</i>	<i>Dalpur</i>	Fabaceae	6

Table 1. Continued

Current plant species name	Species name cited (if different from current)	Species code	Family	No. of Lepidoptera spp. collected
<i>Dasistoma macrophylla</i> (Nuttall) Rafinesque-Schmaltz	<i>Seymeria macrophylla</i>	<i>Dasmac</i>	Scrophulari aceae	2
<i>Datura stramonium</i> L.	<i>D. stramonium</i> , <i>D. tatula</i>	<i>Datstr</i>	Solanaceae	2,2
<i>Delphinium tricornis</i> Michaux	—	<i>Deltri</i>	Ranunculaceae	8
<i>Desmodium illinoense</i> Gray	—	<i>Desill</i>	Fabaceae	1
<i>Dicentra cucullaria</i> (L.) Bernhardt	—	<i>Diccuc</i>	Papaveraceae	6
<i>Diospyros virginiana</i> L.	—	<i>Diovir</i>	Ebenaceae	2
<i>Dipsacus fullonum</i> ssp. <i>sylvestris</i> (Hudson) Clapham	<i>D. sylvestris</i>	<i>Dipful</i>	Dipsacaceae	5
<i>Dirca palustris</i> L.	—	<i>Dirpal</i>	Thymelaeaceae	1
<i>Dodecatheon meadia</i> L.	—	<i>Dodmea</i>	Primulaceae	1
<i>Echinacea pallida</i> (Nuttall) Nuttall	<i>Brauneria pallida</i>	<i>Echpal</i>	Asteraceae	12
<i>Echinacea purpurea</i> (L.) Moench	<i>Brauneria purpurea</i>	<i>Echpur</i>	Asteraceae	13
<i>Erechtites hieracifolia</i> (L.) Rafinesque-Schmaltz	—	<i>Erehie</i>	Asteraceae	1
<i>Erigeron bulbosa</i> (Michaux) Nuttall	—	<i>Eribul</i>	Apiaceae	2
<i>Erigeron philadelphicus</i> L.	—	<i>Eriphi</i>	Asteraceae	7
<i>Erigeron pulchellus</i> Michaux	—	<i>Eripul</i>	Asteraceae	2
<i>Erigeron strigosus</i> Muhlenberg ex Willdenow	<i>E. ramosus</i>	<i>Eristr</i>	Asteraceae	1
<i>Eryngium yuccifolium</i> Michaux	—	<i>Eryyuc</i>	Apiaceae	21
<i>Erythronium albidum</i> Nuttall	—	<i>Eryalb</i>	Liliaceae	3
<i>Eupatorium altissimum</i> L.	—	<i>Eupalt</i>	Asteraceae	7
<i>Eupatorium coelestinum</i> L.	—	<i>Eupcoe</i>	Asteraceae	8
<i>Eupatorium perfoliatum</i> L.	—	<i>Eupper</i>	Asteraceae	7
<i>Eupatorium purpureum</i> L.	—	<i>Euppur</i>	Asteraceae	10
<i>Eupatorium serotinum</i> Michaux	—	<i>Eupser</i>	Asteraceae	15
<i>Eupatorium sessilifolium</i> L.	—	<i>Eupses</i>	Asteraceae	1
<i>Euphorbia corollata</i> L.	—	<i>Eupcor</i>	Euphorbiaceae	1
<i>Euthamia graminifolia</i> (L.) Nuttall	<i>Solidago graminifolia</i>	<i>Eutgra</i>	Asteraceae	8
<i>Fragaria virginiana</i> ssp. <i>grayana</i> (Vilmorin ex J. Gray) Staudt	<i>F. virginiana illinoensis</i>	<i>Fravir</i>	Rosaceae	7
<i>Frasera carolinensis</i> Walter	—	<i>Fracar</i>	Gentianaceae	1
<i>Geranium maculatum</i> L.	—	<i>Germac</i>	Geraniaceae	4
<i>Glechoma hederacea</i> L.	<i>Nepeta hederacea</i>	<i>Glehed</i>	Lamiaceae	6
<i>Gnaphalium obtusifolium</i> L.	<i>G. polycephalum</i>	<i>Gnaobt</i>	Asteraceae	3
<i>Gymnocladus dioica</i> (L.) K. Koch	—	<i>Gymdio</i>	Fabaceae	1
<i>Helenium autumnale</i> L.	—	<i>Helaut</i>	Asteraceae	4
<i>Helianthus annuus</i> L.	—	<i>Helann</i>	Asteraceae	4
<i>Helianthus divaricatus</i> L.	—	<i>Heldiv</i>	Asteraceae	4
<i>Helianthus grosseserratus</i> Martens	<i>H. grosse-serratus</i>	<i>Helgro</i>	Asteraceae	13
<i>Helianthus laetiflorus</i> Persoon	—	<i>Hellae</i>	Asteraceae	3
<i>Helianthus mollis</i> Lamarek	—	<i>Helmol</i>	Asteraceae	2
<i>Helianthus strumosus</i> L.	—	<i>Helstr</i>	Asteraceae	2
<i>Helianthus tuberosus</i> L.	—	<i>Heltub</i>	Asteraceae	4
<i>Helipopsis helianthoides</i> (L.) Sweet	—	<i>Helhel</i>	Asteraceae	4
<i>Heraclium maximum</i> Bartram	<i>H. lanatum</i>	<i>Hermax</i>	Apiaceae	7
<i>Hibiscus trionum</i> L.	—	<i>Hibtri</i>	Malvaceae	2
<i>Houstonia purpurea</i> var. <i>calycosa</i> Gray	—	<i>Houpur</i>	Rubiaceae	7
<i>Hydrangea arborescens</i> L.	—	<i>Hydarb</i>	Saxifragaceae	2
<i>Hydrophyllum appendiculatum</i> Michaux	—	<i>Hydapp</i>	Hydrophyllaceae	4
<i>Impatiens capensis</i> Meerburgh	<i>I. biflora</i>	<i>Impcap</i>	Balsaminaceae	1
<i>Ipomoea pandurata</i> (L.) G.F.W. Meyer	—	<i>Ipopan</i>	Convolvulaceae	4
<i>Ipomoea purpurea</i> (L.) Roth	—	<i>Ipopur</i>	Convolvulaceae	1
<i>Iris versicolor</i> L.	—	<i>Iricer</i>	Iridaceae	3
<i>Justicia americana</i> (L.) Vahl	<i>Dianthera americana</i>	<i>Jusame</i>	Acanthaceae	8
<i>Krigia amplexicaulis</i> ^a	—	<i>Kriamp</i>	Asteraceae	5
<i>Lantana camara</i> L.	—	<i>Lancam</i>	Verbenaceae	8
<i>Lepidium virginicum</i> L.	—	<i>Lepvir</i>	Brassicaceae	1
<i>Lespedeza capitata</i> Michaux	—	<i>Lescap</i>	Fabaceae	1
<i>Lespedeza procumbens</i> Michaux	—	<i>Lespro</i>	Fabaceae	1
<i>Lespedeza virginica</i> (L.) Britton	—	<i>Lesvir</i>	Fabaceae	4
<i>Liatris pycnostachya</i> Michaux	—	<i>Liapyc</i>	Asteraceae	12
<i>Liatris scariosa</i> (L.) Willdenow	—	<i>Liasca</i>	Asteraceae	5
<i>Lilium superbum</i> L.	—	<i>Lilsup</i>	Liliaceae	3
<i>Linaria vulgaris</i> P. Miller	—	<i>Linvil</i>	Scrophulariaceae	5
<i>Lindernia dubia</i> (L.) Pennell	<i>Ilysanthes dubia</i>	<i>Lindub</i>	Scrophulariaceae	5
<i>Lithospermum canescens</i> (Michaux) Lehmann	—	<i>Litcan</i>	Boraginaceae	18
<i>Lobelia cardinalis</i> L.	—	<i>Lobcar</i>	Campanulaceae	2
<i>Lobelia leptostachys</i> ^a	—	<i>Loblep</i>	Campanulaceae	3
<i>Lobelia siphilitica</i> L.	—	<i>Lobsip</i>	Campanulaceae	2
<i>Lobelia spicata</i> Lamarek	—	<i>Lobspi</i>	Campanulaceae	7
<i>Ludwigia alternifolia</i> L.	—	<i>Ludalt</i>	Onagraceae	1

Table 1. Continued

Current plant species name	Species name cited (if different from current)	Species code	Family	No. of Lepidoptera spp. collected
<i>Lycopus americanus</i> Muhlenberg	—	<i>Lycame</i>	Lamiaceae	8
<i>Lythrum alatum</i> Pursh	—	<i>Lytala</i>	Lythraceae	12
<i>Malus coronaria</i> (L.) Miller	<i>Pyrus coronaria</i>	<i>Malcor</i>	Rosaceae	2
<i>Malva rotundifolia</i> L.	—	<i>Malrot</i>	Malvaceae	2
<i>Marrubium vulgare</i> L.	—	<i>Marvul</i>	Lamiaceae	1
<i>Melanthium virginicum</i> L.	—	<i>Melvir</i>	Liliaceae	1
<i>Melilotus officinalis</i> (L.) Lamarck	<i>M. alba</i>	<i>Meloff</i>	Fabaceae	14
<i>Mentha arvensis</i> L.	—	<i>Menarv</i>	Lamiaceae	2
<i>Mertensia virginica</i> (L.) Persoon ex Link	—	<i>Mervir</i>	Boraginaceae	6
<i>Monarda bradburiana</i> Beck	—	<i>Monbra</i>	Lamiaceae	11
<i>Monarda fistulosa</i> L.	—	<i>Monfis</i>	Lamiaceae	23
<i>Myosotis verna</i> Nuttall	<i>M. virginica</i>	<i>Myover</i>	Boraginaceae	1
<i>Nepeta cataria</i> L.	—	<i>Nepcat</i>	Lamiaceae	11
<i>Nothoscordum bivalve</i> (L.) Britton	—	<i>Notbiv</i>	Liliaceae	4
<i>Oenothera biennis</i> L.	—	<i>Oenbie</i>	Onagraceae	1
<i>Oenothera fruticosa</i> L.	—	<i>Oenfru</i>	Onagraceae	4
<i>Orbexilum onobrychis</i> (Nuttall) Rydberg	<i>Psoralea onobrychis</i>	<i>Orbono</i>	Fabaceae	6
<i>Osmorhiza longistylis</i> (Torrey) DeCandolle	—	<i>Tosmlon</i>	Apiaceae	2
<i>Oxalis corniculata</i> L.	—	<i>Oxacor</i>	Oxalidaceae	4
<i>Oxalis stricta</i> L.	—	<i>Oxastr</i>	Oxalidaceae	3
<i>Oxalis violacea</i> L.	—	<i>Oxavio</i>	Oxalidaceae	3
<i>Oxypolis rigidior</i> (L.) Rafinesque-Schmaltz	—	<i>Oxyrig</i>	Apiaceae	3
<i>Pastinaca sativa</i> L.	—	<i>Passat</i>	Apiaceae	9
<i>Penstemon hirsutus</i> (L.) Willdenow	<i>Penstemon hirsutus</i>	<i>Penhir</i>	Scrophulariaceae	4
<i>Penstemon laevigatus</i> Aiton	<i>Penstemon laevigatus</i>	<i>Penlae</i>	Scrophulariaceae	3
<i>Philadelphus inodorus</i> L.	<i>P. grandiflorus</i>	<i>Phiino</i>	Saxifragaceae	2
<i>Phlox divaricata</i> L.	—	<i>Phldiv</i>	Polemoniaceae	16
<i>Phlox glaberrima</i> L.	—	<i>Phlglg</i>	Polemoniaceae	7
<i>Phlox pilosa</i> L.	—	<i>Phlpil</i>	Polemoniaceae	12
<i>Phyla lanceolata</i> (Michaux) Greene	<i>Lippia lanceolata</i>	<i>Phylan</i>	Verbenaceae	9
<i>Physostegia virginiana</i> (L.) Benthham	—	<i>Phycir</i>	Lamiaceae	2
<i>Platanthera leucophaea</i> (Nuttall) Lindley	<i>Habenaria leucophaea</i>	<i>Plaleu</i>	Orchidaceae	1
<i>Polemonium reptans</i> L.	—	<i>Polrep</i>	Polemoniaceae	5
<i>Polygonum lapathifolium</i> L.	—	<i>Pollap</i>	Polygonaceae	1
<i>Polygonum pennsylvanicum</i> L.	—	<i>Polpen</i>	Polygonaceae	8
<i>Polygonum scandens</i> L.	—	<i>Polsca</i>	Polygonaceae	4
<i>Porteranthus stipulatus</i> (Muhlenberg ex Willdenow) Britton	<i>Gillenia stipulacea</i>	<i>Porsti</i>	Rosaceae	4
<i>Potentilla canadensis</i> L.	—	<i>Potcan</i>	Rosaceae	1
<i>Potentilla norvegica</i> ssp. <i>monspeliensis</i> (L.) Ascherson, Graebner	<i>P. monspeliensis norvegica</i>	<i>Potnor</i>	Rosaceae	1
<i>Prunella vulgaris</i> L.	—	<i>Pruwul</i>	Lamiaceae	8
<i>Prunus americana</i> Marshall	—	<i>Pruame</i>	Rosaceae	7
<i>Prunus serotina</i> Ehrhart	—	<i>Pruser</i>	Rosaceae	2
<i>Ptelea trifoliata</i> L.	—	<i>Ptetri</i>	Rutaceae	2
<i>Pycnanthemum flexuosum</i> (Walter) Britton, Sterns, Poggenberg	—	<i>Pycfle</i>	Lamiaceae	29
<i>Pycnanthemum virginianum</i> (L.) Durand, Jackson	—	<i>Pycvir</i>	Lamiaceae	2
<i>Ranunculus fascicularis</i> Muhlenberg ex Bigelow	—	<i>Ranfasc</i>	Ranunculaceae	2
<i>Ranunculus hispidus</i> var. <i>nitidus</i> (Chapman) T. Duncan	<i>R. septentrionalis</i>	<i>Ranhis</i>	Ranunculaceae	3
<i>Ratibida pinnata</i> (Ventenat) Barnhart	<i>Lepachys pinnata</i>	<i>Ratpin</i>	Asteraceae	3
<i>Rhus glabra</i> L.	—	<i>Rhugla</i>	Anacardiaceae	3
<i>Ribes aureum</i> var. <i>gracillimum</i> (Coville, Britton) Jepson	<i>R. gracile</i>	<i>Ribaur</i>	Saxifragaceae	2
<i>Robinia pseudoacacia</i> L.	<i>R. pseudoacacia</i>	<i>Robpse</i>	Fabaceae	3
<i>Rubus canadensis</i> L.	—	<i>Rubcan</i>	Rosaceae	9
<i>Rubus occidentalis</i> L.	—	<i>Rubocc</i>	Rosaceae	4
<i>Rubus villosus</i> ^a	—	<i>Rubvil</i>	Rosaceae	13
<i>Rudbeckia hirta</i> L.	—	<i>Rudhir</i>	Asteraceae	12
<i>Rudbeckia laciniata</i> L.	—	<i>Rudlac</i>	Asteraceae	5
<i>Rudbeckia subtomentosa</i> Pursh	—	<i>Rudsub</i>	Asteraceae	12
<i>Rudbeckia triloba</i> L.	—	<i>Rudtri</i>	Asteraceae	7
<i>Sagittaria latifolia</i> Willdenow	—	<i>Saglat</i>	Alismaceae	4
<i>Salix cordata</i> Michaux	—	<i>Salcor</i>	Salicaceae	1
<i>Salix exigua</i> Nuttall	<i>S. longifolia</i>	<i>Sallexi</i>	Salicaceae	1
<i>Salix humilis</i> Marshall	—	<i>Salhum</i>	Salicaceae	1
<i>Salix nigra</i> Marshall	—	<i>Salnig</i>	Salicaceae	2
<i>Sambucus canadensis</i> (L.)	—	<i>Samcan</i>	Caprifoliaceae	1
<i>Saponaria officinalis</i> (L.)	—	<i>Sapoff</i>	Caryophyllaceae	2
<i>Sassafras albidum</i> (Nuttall) Nees Von Esenbeck	<i>S. variifolium</i>	<i>Sasalb</i>	Lauraceae	1
<i>Scrophularia marilandica</i> L.	—	<i>Scrmar</i>	Scrophulariaceae	2
<i>Scutellaria incana</i> Biehler	<i>S. canescans</i>	<i>Scuinc</i>	Lamiaceae	2

Table 1. Continued

Current plant species name	Species name cited (if different from current)	Species code	Family	No. of Lepidoptera spp. collected
<i>Scutellaria ovata</i> Hill	<i>S. versicolor</i>	<i>Scuova</i>	Lamiaceae	2
<i>Scutellaria parvula</i> Michaux	—	<i>Scupar</i>	Lamiaceae	3
<i>Sida spinosa</i> L.	—	<i>Sidspi</i>	Malvaceae	5
<i>Silphium laciniatum</i> L.	—	<i>Sillac</i>	Asteraceae	2
<i>Silphium perfoliatum</i> L.	—	<i>Silper</i>	Asteraceae	20
<i>Sium suave</i> Walter	<i>S. cicutaeifolium</i>	<i>Siusua</i>	Apiaceae	5
<i>Smilax herbacea</i> L.	—	<i>Smiher</i>	Liliaceae	1
<i>Solidago canadensis</i> L.	—	<i>Solcan</i>	Asteraceae	8
<i>Solidago nemoralis</i> Aiton	—	<i>Solnem</i>	Asteraceae	6
<i>Solidago rigida</i> L.	—	<i>Solrig</i>	Asteraceae	7
<i>Solidago speciosa</i> Nuttall	—	<i>Solspe</i>	Asteraceae	2
<i>Stachys palustris</i> L.	—	<i>Stapal</i>	Lamiaceae	5
<i>Staphylea trifolia</i> L.	—	<i>Statri</i>	Staphyleaceae	1
<i>Stellaria media</i> (L.) Villars	—	<i>Stemed</i>	Caryophyllaceae	2
<i>Stylosanthes biflora</i> (L.) Britton, Sterns, Poggenberg	—	<i>Stybif</i>	Fabaceae	1
<i>Taenidia integerrima</i> (L.) Drude	—	<i>Taeint</i>	Apiaceae	1
<i>Taraxacum officinale</i> G. H. Webber ex Wiggers	—	<i>Taroff</i>	Asteraceae	1
<i>Teucrium canadense</i> L.	—	<i>Teucan</i>	Lamiaceae	6
<i>Thaspium trifoliatum</i> var. <i>aureum</i> (L.) Britton	<i>T. aureum trifoliatum</i>	<i>Thatri</i>	Apiaceae	1
<i>Tilia americana</i> L.	—	<i>Tilame</i>	Tiliaceae	1
<i>Trifolium hybridum</i> L.	—	<i>Trihyb</i>	Fabaceae	3
<i>Trifolium pratense</i> L.	—	<i>Triptra</i>	Fabaceae	20
<i>Trifolium reflexum</i> L.	—	<i>Triref</i>	Fabaceae	1
<i>Trifolium repens</i> L.	—	<i>Trirep</i>	Fabaceae	17
<i>Triodanis perfoliata</i> (L.) Nieuwland	<i>Specularia perfoliata</i>	<i>Triper</i>	Campanulaceae	3
<i>Valerianella radiata</i> (L.) Dufresne	—	<i>Valrad</i>	Valerianaceae	1
<i>Verbena bracteata</i> Lagasca, Rodriguez	—	<i>Verbra</i>	Verbenaceae	2
<i>Verbena hastata</i> L.	—	<i>Verhas</i>	Verbenaceae	6
<i>Verbena simplex</i> Lehmann	<i>V. angustifolia</i>	<i>Versim</i>	Verbenaceae	1
<i>Verbena stricta</i> Ventenat	—	<i>Verstr</i>	Verbenaceae	30
<i>Verbena urticifolia</i> L.	<i>V. urticaefolia</i>	<i>Verurt</i>	Verbenaceae	6
<i>Verbesina helianthoides</i> Michaux	—	<i>Verhel</i>	Asteraceae	3
<i>Vernonia fasciculata</i> Michaux	—	<i>Verfas</i>	Asteraceae	16
<i>Veronicastrum virginicum</i> (L.) Farwell	<i>Veronica virginica</i>	<i>Vervir</i>	Scrophulariaceae	7
<i>Viburnum dentatum</i> L.	<i>V. pubescens</i>	<i>Vibden</i>	Caprifoliaceae	2
<i>Viburnum prunifolium</i> (L.)	—	<i>Vibpru</i>	Caprifoliaceae	7
<i>Viola cucullata</i> Aiton	—	<i>Viocuc</i>	Violaceae	6
<i>Viola pedata</i> L.	—	<i>Vioped</i>	Violaceae	7
<i>Viola pubescens</i> Aiton	—	<i>Viopub</i>	Violaceae	3
<i>Viola sagittata</i> Aiton	—	<i>Viosag</i>	Violaceae	1
<i>Viola striata</i> Aiton	—	<i>Viostr</i>	Violaceae	2
<i>Zanthoxylum americanum</i> Miller	—	<i>Zaname</i>	Rutaceae	1
<i>Zizia aurea</i> (L.) Koch	—	<i>Zizaur</i>	Apiaceae	5

Plant species codes are the first three letters of genus and species names.

^a Cited as in Robertson; could not confirm current name.

listed as numerous) and *A. pilosus* (with six numerous species). Four lepidopteran species were abundant on the purple-flowered *Lythrum alatum* Pursh (Lythraceae), which was visited by only 12 species (Table 2), suggesting that its flowers were selectively attractive.

The most polyphagous lepidopteran species that Robertson recorded were *Colias philodice* Godart (Pieridae; recorded from 103 flowering plant species), *Danaus plexippus* (L.) (Danaiidae; 61 species), *Artogetia rapae* (L.) [= *Pieris rapae* (L.); Pieridae; 60 species], *Phyciodes tharos* (Drury) (Nymphalidae; 56 species), *Polites themistocles* (Latreille) (Hesperiidae; 55 species), *Pontia protodice* (Boisduval & LeConte) (Pieridae; 54 species), and *Everes comyntas* (Godart) (Lycaenidae; 50 species; Table 2). Robertson also recorded 20 lepidopteran species from single species of flowering plants (Table 2), including skippers *Ambly-*

scirtes hegon (Scudder), *Euphyes dion* (W. H. Edwards) and butterflies *Celastrian* sp. and *Polygonia comma* (Harris), and many moth species (arctiids, noctuids, pyralids, and sesiids). In fact, 50% (15 out of 30 species) of moth species were recorded from single species of plants compared with six percent (4 of 68 species) of apparently monophagous butterflies and skippers. This disparity, however, could be due to under-sampling of nocturnal species.

The single danaid, *Danaus plexippus* L., was recorded from 61 plant species, while arctiids, pierids, papilionids, and lycaenids were recorded from an average of 9–18 plant species per lepidopteran species; the remaining families were associated with less than nine plant species (Table 4). Level of polyphagy also could be a consequence of sampling bias. For example, species associated with the greatest number of plant

Table 2. Lepidoptera/host plant associations reported by Robertson (1928)

Lepidoptera superfamily/ family	Current species name	Species name cited (if different from current)	Plant family and species code
Noctuoidea Arctiidae	<i>Ciseps fulvicollis</i> (Hübner)	<i>Scepsis fulvicollis</i>	Api: <i>Cicmac</i> , <i>Eryyuc</i> ; Asc: <i>Ascinc</i> , <i>Asclon</i> , ^a <i>Ascstul</i> , <i>Ascstyr</i> , <i>Asctub</i> , <i>Ascver</i> ; Ast: <i>Agealt</i> , <i>Arnpla</i> , <i>Astcor</i> , <i>Astlan</i> , <i>Astlat</i> , <i>Astpil</i> , ^a <i>Bidlae</i> , <i>Bolast</i> , <i>Cirvul</i> , <i>Corpul</i> , <i>Eriphi</i> , <i>Eupalt</i> , <i>Eupcoe</i> , <i>Eupper</i> , <i>Eupser</i> , <i>Gnaobt</i> , <i>Helaut</i> , <i>Helgro</i> , <i>Hellae</i> , <i>Liapyc</i> , <i>Rudhir</i> , <i>Rudlac</i> , <i>Rudsub</i> , <i>Solcan</i> , <i>Solnem</i> , <i>Solspe</i> , ^a <i>Verhel</i> ; Cor: <i>Coramo</i> ; Lam: <i>Blehir</i> , <i>Lycame</i> , <i>Pyefle</i> ; Pole: <i>Phlgl</i> ; Poly: <i>Polpen</i> ; Ros: <i>Rubvil</i> ; Rub: <i>Cepocc</i> ; Ser: <i>Scrmar</i> , <i>Vervir</i> ; Til: <i>Tilame</i> ; Ver: <i>Verhas</i>
Noctuidae	<i>Haploa colona</i> (Hübner)	<i>Callimorpha fulvicosta</i>	Asc: <i>Ascstyr</i>
	<i>Utetheisa bella</i> (L.)	—	Api: <i>Bolast</i> , <i>Eryyuc</i> , <i>Eutgra</i> , <i>Helgro</i> , <i>Solnem</i> ; Rub: <i>Cepocc</i>
	<i>Agrotis ipsilon</i> (Hufnagel)	<i>A. ypsilon</i>	Asc: <i>Ascstyr</i>
	<i>Alypia octomaculata</i> (F.)	—	Rut: <i>Ptetri</i>
	<i>Anagrapha falcifera</i> (W. F. Kirby)	<i>Plusia simplex</i>	Api: <i>Eribul</i> , <i>Zizaur</i> ; Ast: <i>Astlan</i> , <i>Astnov</i> , <i>Astpil</i> , <i>Bidlae</i> , <i>Corpul</i> , <i>Helgro</i> , <i>Rudhir</i> ; Bor: <i>Litcan</i> ; Fab: <i>Trirep</i> ; Lam: <i>Glehed</i> , <i>Stapal</i> ; Lil: <i>Notbiv</i> ; Pole: <i>Phldiv</i> , <i>Phlpil</i> , ^a <i>Polrep</i> , ^a Ros: <i>Fravir</i> , <i>Pruame</i> ; Rut: <i>Zaname</i> ; Ver: <i>Lancam</i> ; Vio: <i>Vioped</i>
	<i>Autographa precatonis</i> (Guenée)	<i>Plusia precatonis</i>	Lam: <i>Stapal</i>
	<i>Caenurgia erechtea</i> (Cramer)	<i>Drasteria erechtea</i>	Asc: <i>Ascstyr</i> ; Ast: <i>Antpla</i> , <i>Astpil</i> , <i>Astpil</i> , <i>Eupper</i> , <i>Solrig</i>
	<i>Euxoa velleripennis</i> (Grote)	<i>Carneades velleripennis</i>	Ast: <i>Solcan</i>
	<i>Faronta diffusa</i> (Walker)	<i>Leucania albilinea</i>	Ast: <i>Verfas</i>
	<i>Feltia jaculifera</i> (Guenée)	<i>F. subgothica</i>	Ast: <i>Astpil</i> , <i>Bidlae</i> , <i>Eupser</i> , <i>Solcan</i>
<i>Helicoerpa zea</i> (Boddie)	<i>Heliothis armiger</i>	Ast: <i>Astnov</i> , <i>Astpil</i> , <i>Bidari</i> , <i>Bidlae</i> , <i>Bolast</i> , <i>Eutgra</i> , <i>Solcan</i> , ^b <i>Solnem</i> ; Poly: <i>Polpen</i>	
<i>Heliothis phloxiphagus</i> Grote & Robinson	<i>H. dipsaceus</i>	Ast: <i>Bidlae</i>	
<i>Schinia jaguarina</i> (Guenée)	—	Fab: <i>Orbono</i>	
<i>Spragueia leo</i> (Guenée)	—	Api: <i>Eryyuc</i> ; Ast: <i>Eupser</i>	
<i>Tarachidia candefacta</i> (Hübner)	<i>Acontia candefacta</i>	Api: <i>Eryyuc</i>	
Pyraloidea Pyralidae	<i>Crambus laqueatellus</i> Clemens	—	Ast: <i>Eutgra</i>
<i>Nomophila nearctica</i> (Munroe)	<i>N. noctuella</i>	Scr: <i>Vervir</i>	
<i>Omiodes simialis</i> Guenée	<i>Loxostege simialis</i>	Asc: <i>Ascstyr</i> ; Ast: <i>Antpla</i> ; Scr: <i>Vervir</i>	
Sesiodea Sesiidae	<i>Carmenta bassiformis</i> (Walker)	<i>Sesia sexfasciata</i> , <i>S. 6-fasciata</i>	Api: <i>Eryyuc</i> ; Asc: <i>Ascstul</i> ; Ast: <i>Armmue</i> ; Fab: <i>Meloff</i>
<i>Carmenta pyralidiformis</i> (Walker)	—	Ast: <i>Eupser</i>	
<i>Eumorpha pandors</i> (Hübner)	<i>Philampelus pandorus</i>	Sol: <i>Datstr</i>	
<i>Synanthedon pictipes</i> (Grote & Robinson)	<i>Sesia pictipes</i>	Api: <i>Passat</i>	
Sphingoidea Sphingidae	<i>Hemaris diffinis</i> (Boisduval)	<i>H. axillaris</i>	Asc: <i>Ascstul</i> ; Fab: <i>Orbono</i> , <i>Tripra</i> ; Lam: <i>Monfis</i> , <i>Teucan</i> ; Ver: <i>Verstr</i>
<i>Hemaris thysbe</i> (F.)	—	Ast: <i>Ciralt</i> , <i>Cirdis</i> , <i>Echpal</i> ; Bor: <i>Mervir</i> ; Cap: <i>Vibpru</i> ; Ger: <i>Germac</i> ; Lam: <i>Monfis</i> ; Pole: <i>Phldiv</i> , <i>Polrep</i>	
<i>Hyles lineata</i> (F.)	<i>Deilephila lineata</i>	Ast: <i>Ciralt</i> , <i>Cirdis</i> ; Bor: <i>Mervir</i> ; Con: <i>Ipopur</i> ; Fab: <i>Robpse</i> ; Ona: <i>Oembie</i> ; Pole: <i>Phldiv</i> ; Ran: <i>Deltri</i> ; Scr: <i>Penlae</i> ; Sol: <i>Datstr</i>	
<i>Manduca quinquemaculata</i> (Haworth)	<i>Protoparce celeus</i>	Sol: <i>Datstr</i>	
<i>Sphinx eremitus</i> (Hübner)	—	Con: <i>Ipopan</i>	
<i>Xylophanes tersa</i> (L.)	<i>Chaerocampa tersa</i>	Asc: <i>Ascstyr</i> ; Orc: <i>Plaleu</i>	
Zygaenoidea Zygaenidae	<i>Harrisina americana</i> (Guérin)	—	Api: <i>Passat</i> ; Sax: <i>Hydarb</i>
Hesperioidea Hesperiidae	<i>Achalarus lyciades</i> (Geyer)	<i>A. lycidas</i>	Asc: <i>Ascinc</i> , <i>Ascstyr</i> , <i>Ascver</i> , <i>Blecil</i> , <i>Monfis</i>
<i>Amblyscirtes hegon</i> (Scudder)	<i>A. samoset</i>	Hyd: <i>Hydapp</i>	
<i>Ancyloxypha numitor</i> (F.)	—	Ast: <i>Bolast</i> , <i>Eriphi</i> , <i>Eupper</i> ; Cam: <i>Lopspi</i> ; Fab: <i>Trihyb</i> , <i>Trirep</i> ; Lam: <i>Lycame</i> , <i>Menarv</i> , <i>Pruvul</i> , <i>Scupar</i> , <i>Stapal</i> ; Lyr: <i>Lytala</i> ; Rub: <i>Houpur</i> , ^b Scr: <i>Lindub</i> ; Ver: <i>Lancam</i> , <i>Phylan</i> , <i>Verhas</i> , <i>Verstr</i>	
<i>Atalopedes campestris</i> (Boisduval)	<i>A. huron</i>	Ast: <i>Astcor</i> , <i>Astlan</i> , <i>Astpil</i> , ^a <i>Asttur</i> , <i>Bidlae</i> , <i>Eupser</i> , <i>Gnaobt</i> ; Rub: <i>Cepocc</i> ; Ver: <i>Verstr</i>	
<i>Atrytone delaware</i> W. H. Edwards	—	Ast: <i>Silper</i> ; Lam: <i>Monfis</i> , <i>Pruvul</i> , <i>Teucan</i> ; Rub: <i>Cepocc</i> ; Ver: <i>Verstr</i> , ^b	

Table 2. Continued

Lepidoptera superfamily/ family	Current species name	Species name cited (if different from current)	Plant family and species code
	<i>Epargyreus clarus</i> (Cramer)	<i>E. tityrus</i>	Aca: <i>Jusame</i> ; Asc: <i>Ascinc</i> , <i>Ascsl</i> , <i>Ascsl</i> , <i>Ascsl</i> ; Ast: <i>Aspfil Bidari</i> , <i>Eupser</i> , <i>Liapyc</i> , <i>Silper</i> , <i>Verfas</i> ; Bra: <i>Carbul</i> ; Cor: <i>Coramo</i> ; Fab: <i>Meloff</i> , <i>Orbono</i> , <i>Triptra</i> , ^b <i>Trirep</i> ; Lam: <i>Blecl</i> , <i>Blehir</i> , <i>Monbra</i> , <i>Monfis</i> , <i>Nepcat</i> , <i>Pycfle</i> , <i>Scuinc</i> ; Pol: <i>Phldiv</i> , <i>Phlpil</i> ; Ran: <i>Deltri</i> ; Ros: <i>Rubcan</i> , <i>Rubvil</i> ; Rub: <i>Cepocc</i> , ^b Sax: <i>Hydarb</i> , <i>Phiino</i> ; Ver: <i>Lancam</i> , <i>Verhas</i> , <i>Verstr</i> ^a
	<i>Erynnis brizo</i> (Boisduval & LeConte)	<i>Thanaos brizo</i>	Ast: <i>Antpla</i> ; Bor: <i>Litcan</i> ; Oxa: <i>Oxavio</i> ; Pole: <i>Polrep</i> ; Ran: <i>Ranhis</i> ; Scr: <i>Colver</i> ; Vio: <i>Viocuc</i> , <i>Vioped</i> ^b
	<i>Erynnis icelus</i> (Scudder & Burgess)	<i>Thanaos icelus</i>	Bor: <i>Litcan</i> , ^a Fab: <i>Astcra</i> , <i>Cercan</i> ; Pole: <i>Phldiv</i> ; Por: <i>Clavir</i> ; Scr: <i>Colver</i> ; Vio: <i>Vioped</i>
	<i>Erynnis juvenalis</i> (F.)	<i>Thanaos juvenalis</i>	Ast: <i>Antpla</i> , <i>Bidari</i> , <i>Corpul</i> , <i>Eripul</i> , <i>Verhel</i> ; Bor: <i>Litcan</i> , <i>Mervir</i> ; Cam: <i>Loblep</i> ; Cap: <i>Vibden</i> , <i>Vibpru</i> , ^a Cor: <i>Corflo</i> ; Fab: <i>Astcra</i> , <i>Cercan</i> , <i>Orbono</i> , <i>Trirep</i> ; Lam: <i>Nepcat</i> , <i>Pycfle</i> ; Lil: <i>Eryalb</i> ; Pole: <i>Polrep</i> , ^a Ran: <i>Ranfas</i> , <i>Ranhis</i> ; Ros: <i>Fravir</i> , <i>Malcor</i> , <i>Pruame</i> , <i>Rubcan</i> , <i>Rubvil</i> ; Rub: <i>Cepocc</i> ; Scr: <i>Limcul</i> ; Sta: <i>Statiri</i> ; Ver: <i>Verstr</i> ; Vio: <i>Viocuc</i> , <i>Vioped</i> , <i>Viopub</i>
	<i>Erynnis martialis</i> (Scudder)	<i>Thanaos martialis</i>	Aca: <i>Jusame</i> ; Api: <i>Osmlon</i> ; Bor: <i>Litcan</i> ; Bra: <i>Capbur</i> ; Cap: <i>Vibpru</i> ; Dip: <i>Dipful</i> ; Fab: <i>Astcan</i> ; Ger: <i>Germac</i> ; Lam: <i>Nepcat</i> , <i>Pycfle</i> ; Pap: <i>Diccuc</i> ; Ver: <i>Verstr</i> ; Vio: <i>Viocuc</i> , <i>Viopub</i>
	<i>Erynnis persius</i> (Scudder)	<i>Thanaos persius</i>	Bor: <i>Litcan</i> ; Scr: <i>Colver</i> ; Ver: <i>Verstr</i> ; Vio: <i>Viostr</i>
	<i>Euphyes dion</i> (W. H. Edwards)	<i>Pamphila dion</i>	Ast: <i>Eupper</i>
	<i>Euphyes ruricola</i> (Boisduval)	<i>E. metacomet</i>	Aca: <i>Jusame</i> ; Asc: <i>Ascsl</i> ; Ast: <i>Eupcoe</i> , <i>Liapyc</i> , <i>Verfas</i> ; Lam: <i>Blehir</i> , <i>Monbra</i> , <i>Monfis</i> ; Ros: <i>Rubvil</i>
	<i>Hylephila phyleus</i> (Drury)	<i>H. phylaeus</i>	Ast: <i>Astcor</i> , <i>Astnov</i> , <i>Bidlae</i> , <i>Bolast</i> ; Ver: <i>Phylan</i>
	<i>Pholisora catullus</i> (F.)	—	Aca: <i>Jusame</i> ; Api: <i>Eryyuc</i> ; Asc: <i>Ascinc</i> , <i>Ascsl</i> , <i>Ascsl</i> ; Ascver: Ast: <i>Corpul</i> , <i>Hellae</i> , <i>Heltub</i> , <i>Helhel</i> , <i>Silper</i> ; Bor: <i>Litcan</i> ; Bra: <i>Capbur</i> , <i>Carbul</i> ; Cam: <i>Lobspi</i> ; Fab: <i>Dalpur</i> , <i>Trirep</i> ; Lam: <i>Lycame</i> , <i>Monfis</i> , <i>Nepcat</i> , <i>Pycfle</i> , <i>Scupar</i> , ^a Lil: <i>Camsci</i> ; Lyt: <i>Lytala</i> , ^a Mal: <i>Abuthe</i> ; Oxa: <i>Oxacor</i> , <i>Oxastr</i> ; Ros: <i>Fravir</i> , <i>Rubcan</i> , <i>Rubocc</i> ; Rub: <i>Houpur</i> ; Ver: <i>Verhas</i> , <i>Versim</i> , <i>Verstr</i>
	<i>Poanes hobomok</i> (Harris)	<i>Pamphila hobomok</i>	Asc: <i>Ascpur</i> ; Lam: <i>Glehed</i>
	<i>Poanes zabulon</i> (Boisduval & LeConte)	<i>Atrytone zabulon</i>	Ast: <i>Circul</i> , <i>Corpul</i> , <i>Silper</i> ; Con: <i>Ipopan</i> ; Cor: <i>Coramo</i> ; Hyd: <i>Hydapp</i> ; Lam: <i>Glehed</i> , ^a <i>Monbra</i> , <i>Monfis</i> , <i>Scuinc</i> ; Pole: <i>Phldiv</i> , ^b Ran: <i>Datstr</i> ; Ros: <i>Rubcan</i> , <i>Rubvil</i> ; Rub: <i>Cepocc</i> ; Scr: <i>Dasmac</i> , ^a <i>Penhir</i>
	<i>Polites coras</i> (Cramer)	<i>P. peckius</i>	Api: <i>Eryyuc</i> , <i>Hermac</i> ; Asc: <i>Ascinc</i> , <i>Ascpur</i> , <i>Ascsl</i> , <i>Ascsl</i> , <i>Ascsl</i> , <i>Ascsl</i> ; Ascver: Ast: <i>Astlan</i> , <i>Astnov</i> , <i>Aspfil</i> , <i>Bolast</i> , <i>Cirpum</i> , <i>Circul</i> , <i>Echpal</i> , <i>Eriphi</i> , <i>Eupalt</i> , <i>Eupcoe</i> , <i>Euppur</i> , <i>Kriamp</i> , <i>Liapyc</i> , ^a <i>Liasca</i> , <i>Rudhir</i> , <i>Rudtri</i> , <i>Solrig</i> , <i>Verfas</i> ; Bra: <i>Capbur</i> ; Cam: <i>Lobspi</i> ; Cor: <i>Coramo</i> ; Fab: <i>Triptra</i> , <i>Trirep</i> ; Iri: <i>Iriver</i> ; Lam: <i>Blehir</i> , <i>Glehed</i> , <i>Pruvil</i> , <i>Pycfle</i> , <i>Scupar</i> , <i>Teucan</i> ; Lyt: <i>Lytala</i> , ^a Ona: <i>Oenfru</i> , ^a Pole: <i>Phlgl</i> , <i>Phlpil</i> , ^a Ros: <i>Rubocc</i> , <i>Rubvil</i> , ^b Rub: <i>Cepocc</i> , <i>Houpur</i> ; Ver: <i>Phylan</i> , <i>Verstr</i>
	<i>Polites origenes</i> (F.)	<i>Limochores manataaqu</i>	Asc: <i>Ascpur</i> , <i>Ascsl</i> ; Ast: <i>Verfas</i> ; Ebe: <i>Diovir</i> ; Lam: <i>Blecl</i>
	<i>Polites themistocles</i> (Latreille)	<i>Limochores taumas</i>	Ali: <i>Saglat</i> ; Api: <i>Eryyuc</i> , <i>Oxyrig</i> , <i>Passat</i> ; Asc: <i>Ascinc</i> , <i>Ascpur</i> , <i>Ascsl</i> , <i>Ascsl</i> , <i>Ascsl</i> , <i>Ascsl</i> ; Ascver: Ast: <i>Arcmin</i> , <i>Aspfil</i> , <i>Bidari</i> , <i>Bolast</i> , <i>Circul</i> , ^a <i>Corpul</i> , <i>Cortri</i> , <i>Echpal</i> , <i>Eriphi</i> , <i>Eupalt</i> , <i>Eupcoe</i> , <i>Eupser</i> , ^a <i>Helaut</i> , <i>Helam</i> , <i>Heldiv</i> , <i>Liapyc</i> , ^a <i>Rudhir</i> , <i>Rudlac</i> , <i>Rudsub</i> , <i>Silper</i> , <i>Verfas</i> , ^a Cam: <i>Lobspi</i> , <i>Loblep</i> ; Cor: <i>Coramo</i> ; Fab: <i>Dalpur</i> , <i>Lesvir</i> , <i>Meloff</i> , <i>Triptra</i> , <i>Trirep</i> , ^a Iri: <i>Iriver</i> ; Lam: <i>Lycame</i> , <i>Pruvil</i> , <i>Pycfle</i> , <i>Stapal</i> ; Lyt: <i>Lytala</i> ; Ona: <i>Oenfru</i> ; Pole: <i>Phldiv</i> ; Poly: <i>Polpen</i> , <i>Polsca</i> ; Ros: <i>Rubcan</i> , <i>Rubocc</i> , <i>Rubvil</i> ; Rub: <i>Cepocc</i> , ^b Scr: <i>Lincul</i> ; Ver: <i>Phylan</i> , <i>Verstr</i> ^b
	<i>Pompeius verna</i> (W. H. Edwards)	<i>Euphyes verna</i>	Asc: <i>Ascinc</i> , <i>Ascpur</i> , <i>Ascver</i> ; Ebe: <i>Diovir</i> ; Lam: <i>Blecl</i>
	<i>Pyrgus oileus</i> (L.)	<i>Hesperia montivaga</i>	Ast: <i>Arcmin</i> , <i>Astcor</i> , <i>Astcor</i> , <i>Aspfil</i> , ^a <i>Bolast</i> , <i>Echpur</i> , <i>Helgro</i> , <i>Rudsub</i> ; Lyt: <i>Lytala</i> ; Mal: <i>Sidspi</i> ; Ver: <i>Verbra</i> , <i>Verstr</i>
	<i>Staphylus hayhurstii</i> (W. H. Edwards)	<i>Pholisora hayhurstii</i>	Asc: <i>Ascver</i> ; Ast: <i>Euppur</i> ; Cam: <i>Camame</i> , <i>Triptra</i> ; Hyd: <i>Hydapp</i> ; Lam: <i>Blecl</i> , <i>Monfis</i> , <i>Pruvil</i> ; Oxa: <i>Oxastr</i> ; Ros: <i>Rubcan</i> ; Scr: <i>Lindub</i> ; Ver: <i>Verstr</i> ^a
	<i>Thorybes bathyllus</i> (J. E. Smith)	—	Aca: <i>Jusame</i> ; Ast: <i>Cirpum</i> , <i>Circul</i> , <i>Echpur</i> ; Gen: <i>Fracar</i> ; Lam: <i>Blecl</i> , <i>Monbra</i> , <i>Monbra</i> , <i>Monfis</i> , <i>Pycfle</i> ; Pole: <i>Phldiv</i> , <i>Phlpil</i> , ^a Ran: <i>Ranhis</i> ; Ros: <i>Porsti</i> ; Rub: <i>Cepocc</i> ; Ver: <i>Verstr</i>
	<i>Thorybes pylades</i> (Scudder)	—	Asc: <i>Ascpur</i> , <i>Ascsl</i> ; Fab: <i>Triptra</i> , <i>Trirep</i> ; Pole: <i>Phlpil</i> ; Ros: <i>Porsti</i> , <i>Rubcan</i>

Table 2. Continued

Lepidoptera superfamily/family	Current species name	Species name cited (if different from current)	Plant family and species code
Papilionoidea Danaidae	<i>Danaus plexippus</i> (L.)	<i>Anosia plexippus</i>	Api: <i>Eryyuc</i> , <i>Passat</i> , <i>Siusua</i> ; Asc: <i>Ascinc</i> , <i>Ascpur</i> , <i>Ascsul</i> , <i>Ascsyr</i> , <i>Asctub</i> , <i>Asever</i> ; Ast: <i>Astcor</i> , <i>Astnov</i> , <i>Aspfil</i> , <i>Bidari</i> , ^a <i>Bidlae</i> , ^b <i>Bolast</i> , <i>Cirdis</i> , <i>Cirpum</i> , <i>Circul</i> , <i>Cortri</i> , <i>Echpal</i> , <i>Echpur</i> , <i>Eupcoe</i> , <i>Eupper</i> , <i>Euppur</i> , <i>Helann</i> , <i>Helgro</i> , ^a <i>Kriamp</i> , <i>Liapyc</i> , <i>Liasca</i> , <i>Sillac</i> , <i>Silper</i> , <i>Solcan</i> , <i>Solnem</i> , <i>Solrig</i> , <i>Verfas</i> ; Bor: <i>Litcan</i> , ^a <i>Mercir</i> ; Cam: <i>Lobsip</i> ; Dip: <i>Dipful</i> ; Fab: <i>Meloff</i> , <i>Robpse</i> , <i>Tripra</i> ; Lam: <i>Aganep</i> , <i>Blecil</i> , <i>Blehir</i> , <i>Monfis</i> , <i>Phycir</i> ; Lil: <i>Lilsup</i> ; Pap: <i>Diccuc</i> ; Pol: <i>Phldiv</i> , <i>Phlglu</i> ; Ran: <i>Deltri</i> ; Ros: <i>Crachr</i> , <i>Cracru</i> , <i>Malcor</i> , <i>Pruame</i> , <i>Pruser</i> , <i>Rubvil</i> ; Rub: <i>Cepocc</i> , ^b Ver: <i>Lancam</i> , <i>Verstr</i>
Libytheidae	<i>Libytheana bachmanii</i> (Kirtland)	<i>Hypatus bachmanni</i>	Api: <i>Cicmac</i> , <i>Passat</i> , <i>Siusua</i> ; Asc: <i>Ascinc</i> ; Ast: <i>Aspfil</i> ; Lam: <i>Pycfle</i>
Lycaenidae	<i>Celastrina ladon</i> (Cramer) ^c	<i>Cyaniris pseudargiolus</i>	Aca: <i>Jusame</i> ; Api: <i>Passat</i> , <i>Siusua</i> , <i>Thatri</i> ; Ast: <i>Agealt</i> , <i>Antpla</i> , <i>Astlan</i> , <i>Rudlac</i> , <i>Rudsub</i> ; Cap: <i>Samcan</i> , <i>Vibpru</i> ; Car: <i>Stemed</i> ; Cor: <i>Coramo</i> ; Fab: <i>Meloff</i> , <i>Triref</i> , <i>Trirep</i> ; Lil: <i>Melvir</i> ; Ran: <i>Clevir</i> ; Ros: <i>Cracru</i> ; Rub: <i>Cepocc</i> ; Sax: <i>Ribaur</i> ; Ver: <i>Verstr</i>
	<i>Celastrina</i> sp.	<i>Cyaniris</i> sp.	Ana: <i>Rhugla</i>
	<i>Everes Comyntas</i> (Godart)	—	Api: <i>Cicmac</i> , <i>Eryyuc</i> , <i>Zizaur</i> ; Asc: <i>Ascpur</i> , <i>Ascsul</i> , <i>Asctub</i> , <i>Ascever</i> ; Ast: <i>Aspfil</i> , <i>Bolast</i> , <i>Eripul</i> , <i>Eupser</i> , <i>Eupses</i> , <i>Eutgra</i> , <i>Ratpin</i> , <i>Rudsub</i> , <i>Rudtri</i> , <i>Solrig</i> ; Bra: <i>Carbul</i> , <i>Carcon</i> ; Cam: <i>Loblep</i> , <i>Triper</i> ; Fab: <i>Cercan</i> , <i>Crosag</i> , <i>Dalcon</i> , <i>Dalpur</i> , <i>Desill</i> , <i>Lespro</i> , <i>Lesvir</i> , ^a <i>Tripra</i> , <i>Trirep</i> ; Ger: <i>Germac</i> ; Lam: <i>Lycame</i> , <i>Pycfle</i> , <i>Teucan</i> ; Lil: <i>Notbiv</i> ; Lyt: <i>Ammcoc</i> ; Ona: <i>Ludalt</i> ; Poly: <i>Polsca</i> ; Por: <i>Clavir</i> ; Ros: <i>Fravir</i> , <i>Potcan</i> , <i>Potnor</i> ; Rub: <i>Cepocc</i> ; Scr: <i>Lindub</i> , <i>Sermar</i> , <i>Vervir</i> ; Ver: <i>Phylan</i> , <i>Verbra</i> , <i>Verstr</i> , <i>Verurt</i> ^a
	<i>Harkenclenus titus</i> (F.)	<i>Strymon titus</i>	Asc: <i>Ascsul</i> , <i>Asctub</i> ; Fab: <i>Meloff</i> ; Lam: <i>Pycfle</i>
	<i>Hyllocaena hyllus</i> (Cramer)	<i>Chrysophanus thoe</i>	Ali: <i>Saglat</i> ; Api: <i>Eryyuc</i> , <i>Passat</i> ; Asc: <i>Asclon</i> , <i>Ascpur</i> , <i>Ascsul</i> , <i>Ascsyr</i> , <i>Asctub</i> , <i>Asever</i> ; Ast: <i>Arnpla</i> , <i>Aspfil</i> , <i>Bidlae</i> , <i>Bolast</i> , <i>Echpal</i> , <i>Erehie</i> , <i>Eriphi</i> , <i>Eristr</i> , <i>Eupser</i> , <i>Eutgra</i> , <i>Rudhir</i> , <i>Rudsub</i> , <i>Silper</i> , <i>Solcan</i> ; Bor: <i>Litcan</i> ; Cam: <i>Lobsip</i> ; Cor: <i>Coramo</i> ; Fab: <i>Meloff</i> , <i>Trihyb</i> ; Iri: <i>Iriver</i> ; Lam: <i>Pycfle</i> ; Lyt: <i>Lytala</i> ; Pole: <i>Phlpil</i> ; Poly: <i>Polpen</i> ; Ros: <i>Rubvil</i> ; Rub: <i>Cepocc</i> , ^b <i>Houpur</i> , ^a Scr: <i>Vervir</i> ; Ver: <i>Phylan</i>
	<i>Lycaena phlaeas</i> (L.)	<i>Heodes hypophlaeas</i>	Api: <i>Zizaur</i> ; Ast: <i>Bolast</i> , <i>Solrig</i>
	<i>Parrhasius m-album</i> (Boisduval & LeConte)	<i>Eupsyche m-album</i>	Api: <i>Oxyrig</i> , <i>Siusua</i> ; Ast: <i>Heltub</i> ; Sal: <i>Salexi</i>
	<i>Satyrrium calanus</i> (Hübner)	<i>Thecla calanus</i>	Ana: <i>Rhugla</i> ; Api: <i>Passat</i> ; Apo: <i>Apocan</i> ; Asc: <i>Ascpur</i> , <i>Ascsyr</i> ; Ast: <i>Rudhir</i> ; Rha: <i>Ceaame</i>
	<i>Satyrrium acadicum</i> (W. H. Edwards)	<i>Thecla sylvinus</i>	Asc: <i>Ascpur</i> ; Rha: <i>Ceaame</i>
	<i>Strymon melinus</i> Hübner	<i>Uranotes melinus</i>	Api: <i>Eryyuc</i> ; Asc: <i>Ascsul</i> ; Ast: <i>Aspfil</i> , <i>Bolast</i> , <i>Corpall</i> , <i>Helhel</i> , <i>Ratpin</i> , <i>Rudsub</i> , <i>Verfas</i> ; Cap: <i>Vibpru</i> ; Fab: <i>Lesvir</i> , <i>Meloff</i> ; Lam: <i>Pycfle</i> ; Rub: <i>Cepocc</i> ; San: <i>Comumb</i> ; Ver: <i>Verstr</i> , <i>Verurt</i>
Nymphalidae	<i>Basilarchia archippus</i> (Cramer)	—	Api: <i>Cicmac</i> , <i>Eryyuc</i> , <i>Hermox</i> , <i>Oxyrig</i> ; Asc: <i>Ascinc</i> , <i>Ascsyr</i> ; Ast: <i>Bidari</i> , <i>Bidlae</i> , <i>Ciralt</i> , <i>Echpal</i> , <i>Eupcoe</i> , <i>Liapyc</i> , <i>Rudhir</i> , <i>Rudsub</i> , <i>Rudtri</i> , <i>Silper</i> , <i>Solrig</i> ; Cor: <i>Coramo</i> ; Lam: <i>Lycame</i> , <i>Monfis</i> , <i>Pycfle</i> ; Rub: <i>Cepocc</i>
	<i>Basilarchia arthemis</i> ssp. <i>astyanax</i> (Drury)	<i>B. astyanax</i>	Api: <i>Passat</i> ; Ast: <i>Astlat</i> , <i>Bidari</i> , <i>Silper</i> ; Cor: <i>Coramo</i>
	<i>Charidryas nycteis</i> (Doubleday)	—	Aca: <i>Jusame</i> ; Ali: <i>Saglat</i> ; Api: <i>Eryyuc</i> , <i>Hermox</i> , <i>Taeint</i> ; Ast: <i>Aspfil</i> , <i>Bidfro</i> , <i>Echpal</i> , <i>Echpur</i> , <i>Eupalt</i> , <i>Euppur</i> , <i>Heldiv</i> , <i>Helstr</i> , <i>Rudhir</i> , <i>Rudlac</i> , <i>Rudsub</i> , <i>Rudtri</i> , ^a <i>Silper</i> ; Bor: <i>Litcan</i> ; Bra: <i>Capbur</i> ; Cap: <i>Vibpru</i> ; Fab: <i>Trihyb</i> , <i>Trirep</i> ; Hyd: <i>Hydapp</i> ; Lam: <i>Blecil</i> , <i>Blehir</i> , <i>Pycfle</i> ; Lil: <i>Camsci</i> ; Lyt: <i>Lytala</i> ; Ros: <i>Rubcan</i> , <i>Rubocc</i> , <i>Rubvil</i> ; Rub: <i>Houpur</i> , ^a Val: <i>Valrad</i>
	<i>Euphydryas phaeton</i> (Drury)	—	Asc: <i>Ascpur</i> ; Ast: <i>Eupalt</i>
	<i>Euptoicta claudia</i> (Cramer)	—	Ast: <i>Astcor</i> , <i>Aspfil</i> , <i>Echpur</i> , <i>Helgro</i> ; Fab: <i>Trirep</i> ; Lam: <i>Pycfle</i> ; Ver: <i>Verstr</i>
	<i>Junonia coenia</i> (Hübner)	—	Ast: <i>Aspfil</i> , <i>Bolast</i> ; Lam: <i>Pycfle</i>
	<i>Nymphalis antiopa</i> (L.)	<i>Euanessa antiopa</i>	Ace: <i>Acesac</i> , ^a Asc: <i>Ascsyr</i> ; Sal: <i>Salhum</i> ; Thy: <i>Dirpal</i>
	<i>Phyciodes tharos</i> (Drury)	—	Api: <i>Cicmac</i> , <i>Eryyuc</i> , <i>Hermox</i> , <i>Zizaur</i> ; Asc: <i>Ascinc</i> , <i>Ascsul</i> , <i>Asctub</i> , <i>Asever</i> ; Ast: <i>Astano</i> , <i>Astlan</i> , <i>Astnov</i> , <i>Aspfil</i> , ^a <i>Asttur</i> , <i>Bidari</i> , <i>Bidlae</i> , <i>Bolast</i> , <i>Circul</i> , <i>Corpall</i> , <i>Cortri</i> , <i>Eriphi</i> , <i>Eupalt</i> , <i>Eupcoe</i> , <i>Eupper</i> , <i>Eupser</i> , <i>Eutgra</i> , <i>Gnaobt</i> , <i>Helaut</i> , <i>Hellae</i> , <i>Helmol</i> , <i>Heltub</i> , <i>Helhel</i> , <i>Kriamp</i> , <i>Ratpin</i> , <i>Rudhir</i> , <i>Rudsub</i> , ^b <i>Rudtri</i> , ^a <i>Verhel</i> ; Bor: <i>Litcan</i> ; Bra: <i>Capbur</i> , <i>Carbul</i> ; Car: <i>Cernut</i> ; Cor: <i>Coramo</i> ; Lam: <i>Lycame</i> , <i>Nepcat</i> , <i>Pycfle</i> , <i>Pycvir</i> , ^a <i>Oxa</i> : <i>Oxacor</i> , ^a <i>Oxavio</i> ; Pole: <i>Phlpil</i> ; Poly: <i>Pollap</i> ; Por: <i>Clavir</i> ; Ros: <i>Fravir</i> ; Rub: <i>Cepocc</i> , ^b Ver: <i>Phylan</i> , <i>Verstr</i> , <i>Verurt</i>

Table 2. Continued

Lepidoptera superfamily/ family	Current species name	Species name cited (if different from current)	Plant family and species code
	<i>Polygonia comma</i> (Harris)	—	Ace: <i>Acesac</i> ^d
	<i>Polygonia interrogationis</i> (F.)	—	Asc: <i>Ascsyr</i> ; Ast: <i>Silper</i> ; Ros: <i>Cramol</i>
	<i>Speyeria cybele</i> (F.)	<i>Argynnis cybele</i>	Api: <i>Cicmac</i> ; Apo: <i>Apocan</i> ; Asc: <i>Ascinc</i> , <i>Ascpur</i> , ^a <i>Ascsul</i> , <i>Ascsyr</i> , <i>Asctub</i> , <i>Ascver</i> ; Ast: <i>Bidari</i> , <i>Ciralt</i> , <i>Cirdis</i> , <i>Cirpum</i> , ^b <i>Corpul</i> , <i>Echpur</i> , <i>Eupser</i> , <i>Helann</i> , <i>Helgro</i> , <i>Rudhir</i> , <i>Verfas</i> ; Cor: <i>Coramo</i> ; Fab: <i>Tripra</i> ; Lam: <i>Blecil</i> , <i>Blehir</i> , <i>Monbra</i> , <i>Monfis</i> , <i>Nepcat</i> , <i>Pycfle</i> ; Lil: <i>Lilsup</i> ; Rub: <i>Cepocc</i> ; Ver: <i>Verstr</i>
	<i>Speyeria idalia</i> (Drury)	—	Api: <i>Eryyuc</i> ; Asc: <i>Ascinc</i> , <i>Ascpur</i> , <i>Ascsyr</i> , <i>Asctub</i> ; Ast: <i>Cirdis</i> , <i>Cirpum</i> , <i>Cirvul</i> , <i>Helgro</i> , <i>Liapyc</i> ; Lam: <i>Monfis</i>
	<i>Vanessa atalanta</i> (L.)	—	Ace: <i>Acesac</i> , ^d Asc: <i>Ascinc</i> , <i>Ascpur</i> , <i>Ascsul</i> , <i>Ascsyr</i> , <i>Ascver</i> ; Ast: <i>Bidiae</i> , <i>Ciralt</i> , <i>Echpal</i> , <i>Silper</i> ; Bor: <i>Litcan</i> , <i>Mervir</i> ; Bra: <i>Carbul</i> ; Cor: <i>Coramo</i> , <i>Corrac</i> ; Fab: <i>Cercan</i> , <i>Meloff</i> , <i>Tripra</i> ; Lam: <i>Blehir</i> , <i>Monfis</i> , <i>Nepcat</i> , <i>Pycfle</i> ; Lil: <i>Camsci</i> ; Pap: <i>Diccuc</i> ; Poly: <i>Polpen</i> , <i>Polsca</i> ; Por: <i>Clavir</i> ; Ros: <i>Pruame</i> , <i>Rubvil</i> ; Rub: <i>Cepocc</i> , ^b Sal: <i>Salcor</i>
	<i>Vanessa cardui</i> (L.)	—	Ast: <i>Astcor</i> , <i>Astlan</i> , <i>Astnov</i> , <i>Astpil</i> , <i>Bidari</i> , ^a <i>Bolast</i> , <i>Cirdis</i> , <i>Echpur</i> , <i>Eupser</i> , <i>Helgro</i> , ^a <i>Silper</i> , <i>Solcan</i> ; Bor: <i>Litcan</i> ; Cam: <i>Camame</i> ; Fab: <i>Tripra</i> ; Lam: <i>Blehir</i> , <i>Monfis</i> , <i>Pycfle</i> ; Lyt: <i>Lytala</i> ; Rub: <i>Cepocc</i> ; Ser: <i>Linvil</i> ; Vio: <i>Vioped</i>
	<i>Vanessa virginiensis</i> (Drury)	<i>V. humtera</i>	Asc: <i>Ascpur</i> ; Ast: <i>Antpla</i> , <i>Astcor</i> , <i>Astlan</i> , <i>Astpil</i> , <i>Bidiae</i> , <i>Bolast</i> , <i>Corpul</i> , <i>Echpal</i> , <i>Echpur</i> , <i>Euppur</i> , <i>Eutgra</i> , <i>Helgro</i> , <i>Rudlac</i> , <i>Silper</i> , <i>Solspe</i> , <i>Taroff</i> ; Bor: <i>Litcan</i> ; Cap: <i>Vibpru</i> ; Car: <i>Stemed</i> ; Cor: <i>Coramo</i> ; Dip: <i>Dipful</i> ; Fab: <i>Cercan</i> , <i>Meloff</i> , <i>Tripra</i> , ^a <i>Trirep</i> ; Lam: <i>Monbra</i> , <i>Monfis</i> , <i>Nepcat</i> , <i>Pycfle</i> , ^b Lau: <i>Sasalb</i> ; Lil: <i>Camsci</i> ; Pole: <i>Phlpil</i> ; Ros: <i>Crachr</i> , <i>Pruame</i> , <i>Pruser</i> ; Rub: <i>Cepocc</i> ; Sal: <i>Sahnig</i> ; Scr: <i>Vervir</i> ; Ver: <i>Verstr</i> ; Vio: <i>Viocuc</i>
Papilionidae	<i>Battus philenor</i> (L.)	<i>Laertias philenor</i>	Api: <i>Eryyuc</i> , <i>Hermx</i> ; Asc: <i>Ascinc</i> , <i>Ascpur</i> , <i>Ascsyr</i> , <i>Asctub</i> ; Ast: <i>Bidari</i> , <i>Cirpum</i> , <i>Euppur</i> , <i>Helgro</i> , <i>Liapyc</i> , <i>Silper</i> ; Cam: <i>Lobcar</i> , <i>Lobsip</i> ; Con: <i>Ipopan</i> ; Cor: <i>Coramo</i> ; Fab: <i>Orbono</i> , <i>Tripra</i> ; Lam: <i>Monbra</i> , <i>Monfis</i> , ^b <i>Pycfle</i> , <i>Teucan</i> ; Ona: <i>Oenfru</i> ; Pole: <i>Phldiv</i> , <i>Phlgla</i> ; Ros: <i>Cracru</i> , <i>Porsti</i> ; Rub: <i>Cepocc</i> ; Scr: <i>Penhir</i> ; Ver: <i>Verstr</i>
	<i>Eurytides marcellus</i> (Cramer)	<i>Iphioides ajax</i>	Api: <i>Cicmac</i> , <i>Hermx</i> ; Bor: <i>Litcan</i> , ^a Bra: <i>Carcon</i> ; Cap: <i>Vibden</i> ; Cor: <i>Corrac</i> ; Fab: <i>Meloff</i> , <i>Robpse</i> , <i>Tripra</i> , <i>Trirep</i> ; Lam: <i>Blecil</i> , <i>Stapal</i> ; Pap: <i>Diccuc</i> ; Pole: <i>Phldiv</i> ; Por: <i>Clavir</i> ; San: <i>Comumb</i> ; Sax: <i>Ribaur</i> ; Ver: <i>Verstr</i>
	<i>Papilio cresphontes</i> Cramer	<i>Heraclides cresphontes</i>	Asc: <i>Ascinc</i> , <i>Ascpur</i> , <i>Ascver</i> ; Ast: <i>Ciralt</i> , <i>Cirdis</i> , <i>Cirpum</i> , <i>Silper</i> , <i>Verfas</i> ; Cor: <i>Coramo</i> ; Fab: <i>Tripra</i> ; Lam: <i>Monbra</i> , <i>Monfis</i> ; Pole: <i>Phldiv</i> , <i>Phlgla</i> ; Ser: <i>Penhir</i> ; Ver: <i>Lancam</i>
	<i>Papilio glaucus</i> L.	<i>Jasoniades glaucus</i>	Asc: <i>Ascinc</i> , <i>Ascpur</i> , <i>Asctub</i> ; Ast: <i>Ciralt</i> , <i>Cirvul</i> , <i>Echpur</i> , <i>Euppur</i> , <i>Silper</i> , <i>Verfas</i> ; Cor: <i>Coramo</i> ; Dip: <i>Dipful</i> ; Lam: <i>Blecil</i> ; Lam: <i>Monbra</i> ; Pap: <i>Diccuc</i> ; Pole: <i>Phldiv</i> , <i>Phlpil</i> ; Ran: <i>Deltri</i> ; Ros: <i>Pruame</i> ; Sax: <i>Phimo</i>
	<i>Papilio polyxenes</i> F.	<i>P. asterias</i>	Asc: <i>Ascinc</i> , <i>Ascsul</i> , <i>Ascsyr</i> , <i>Asctub</i> ; Ast: <i>Bidari</i> , <i>Cirdis</i> , <i>Cirvul</i> , <i>Echpal</i> , <i>Kriamp</i> , <i>Liapyc</i> , <i>Verfas</i> ; Bor: <i>Litcan</i> ; Fab: <i>Astrea</i> , <i>Meloff</i> , <i>Tripra</i> ; Lam: <i>Monfis</i> , ^b <i>Scuova</i> ; Pole: <i>Phldiv</i> , <i>Phlgla</i> , <i>Phlpil</i> ; Ran: <i>Deltri</i> ; Rub: <i>Cepocc</i> , ^b Scr: <i>Penhir</i>
	<i>Papilio troilus</i> L.	<i>Euphoides troilus</i>	Api: <i>Eryyuc</i> ; Asc: <i>Ascinc</i> , <i>Ascpur</i> , <i>Asctub</i> ; Ast: <i>Ciralt</i> , <i>Cirpum</i> , <i>Cirvul</i> , <i>Corpul</i> , <i>Echpur</i> , <i>Liasca</i> , <i>Silper</i> , <i>Verfas</i> ; Bal: <i>Impcap</i> ; Bor: <i>Mervir</i> ; Cam: <i>Lobcar</i> ; Car: <i>Sapoff</i> ; Con: <i>Ipopan</i> ; Fab: <i>Gymdio</i> ; Lam: <i>Monbra</i> , <i>Monfis</i> , <i>Scuova</i> ; Lil: <i>Lilsup</i> ; Pole: <i>Phldiv</i> , <i>Phlpil</i> ; Ran: <i>Deltri</i> ; Ros: <i>Porsti</i> ; Rub: <i>Cepocc</i> ; Scr: <i>Penlae</i> ; Ver: <i>Verstr</i>
Pieridae	<i>Artogeia rapae</i> (L.)	<i>Pieris rapae</i>	Aca: <i>Jusame</i> ; Api: <i>Siusua</i> ; Asc: <i>Ascinc</i> ; <i>Ascver</i> ; Ast: <i>Arcmin</i> , <i>Astano</i> , <i>Asteri</i> , <i>Astlan</i> , <i>Astpil</i> , <i>Bidari</i> , <i>Bidbip</i> , <i>Bolast</i> , <i>Corpul</i> , <i>Echpur</i> , <i>Euppur</i> , <i>Eupser</i> , <i>Helann</i> , <i>Liappyc</i> , <i>Rudhir</i> , <i>Verfas</i> ; Bor: <i>Litcan</i> ; Bra: <i>Carbul</i> ; Cam: <i>Lobsip</i> , <i>Triper</i> ; Fab: <i>Crosag</i> , <i>Tripra</i> , <i>Trirep</i> ; Lam: <i>Aganep</i> , <i>Blecil</i> , <i>Blehir</i> , <i>Glehed</i> , <i>Menarv</i> , <i>Nepcat</i> , <i>Pruvul</i> , <i>Pycfle</i> ; Lil: <i>Eryalb</i> , <i>Notbiy</i> ; Lyt: <i>Lytala</i> ; Mal: <i>Abuthe</i> , <i>Hibtri</i> , <i>Malrot</i> , <i>Sidspi</i> , ^a Oxa: <i>Oxacor</i> , <i>Oxastr</i> ; Pap: <i>Diccuc</i> ; Poly: <i>Polpen</i> , <i>Polsca</i> ; Por: <i>Clavir</i> ; Ros: <i>Fravir</i> ; Rub: <i>Cepocc</i> , <i>Houpur</i> ; Scr: <i>Agaten</i> , <i>Dasmac</i> , <i>Linvil</i> , <i>Vervir</i> ; Ver: <i>Lancam</i> , ^a <i>Verstr</i> , <i>Verurt</i> ; Vio: <i>Viocuc</i> , <i>Vioped</i>

Table 2. Continued

Lepidoptera superfamily/ Family	Current species name	Species name cited (if different from current)	Plant family and species code
	<i>Colias philodice</i> Godart	<i>Eurymus philodice</i>	Ali: <i>Saglat</i> ; Api: <i>Cicmac</i> , <i>Eryguc</i> , <i>Osmlon</i> , <i>Zizaur</i> ; Asc: <i>Ascine</i> , <i>Ascpur</i> , <i>Ascsul</i> , <i>Ascsyr</i> , <i>Asctub</i> , <i>Ascver</i> ; Ast: <i>Antpla</i> , <i>Arcmin</i> , <i>Astcor</i> , <i>Astlan</i> , <i>Astnov</i> , ^a <i>Astpil</i> , ^a <i>Bidari</i> , <i>Bidllae</i> , ^a <i>Bolast</i> , ^a <i>Cirpum</i> , <i>Cirvul</i> , <i>Corpul</i> , <i>Echpal</i> , <i>Echpur</i> , <i>Eupcoe</i> , <i>Eupper</i> , <i>Euppur</i> , <i>Eupser</i> , <i>Eutgra</i> , <i>Helaut</i> , <i>Heldiv</i> , <i>Helgro</i> , <i>Helmol</i> , <i>Helstr</i> , <i>Heltub</i> , <i>Kriamp</i> , <i>Liapyc</i> , ^a <i>Liasca</i> , <i>Rudhir</i> , <i>Rudsub</i> , <i>Rudtri</i> , <i>Sillac</i> , ^a <i>Silper</i> , <i>Solcan</i> , <i>Solnem</i> , <i>Solrig</i> , <i>Verfas</i> , ^b Bor: <i>Litcan</i> , ^a Bra: <i>Carbul</i> ; Car: <i>Cernut</i> ; Fab: <i>Astera</i> , <i>Dalpur</i> , <i>Lescap</i> , <i>Lesvir</i> , <i>Tripra</i> , <i>Trirep</i> ; Ger: <i>Germac</i> ; Lam: <i>Bleclil</i> , <i>Blehir</i> , ^a <i>Glehed</i> , ^b <i>Lycame</i> , <i>Monfis</i> , <i>Nepcat</i> , <i>Phyvir</i> , <i>Prucul</i> , <i>Pycfle</i> , <i>Teucan</i> ; Lil: <i>Camsci</i> , ^a <i>Eryalb</i> , <i>Notbiv</i> ; Lyt: <i>Lytala</i> , ^a Mal: <i>Hibtri</i> , <i>Sidspi</i> ; Oxa: <i>Oxavio</i> ; Pole: <i>Phldiv</i> , <i>Phlgla</i> , <i>Phlpil</i> , ^b <i>Polrep</i> , ^a Poly: <i>Polpen</i> ; Por: <i>Clavir</i> ; Pri: <i>Dodmea</i> ; Ran: <i>Deltri</i> , <i>Ranfás</i> ; Ros: <i>Fravir</i> , <i>Rubcan</i> , <i>Rubvil</i> ; Rub: <i>Cepocc</i> ; Sal: <i>Salnig</i> ; Scr: <i>Agaten</i> , <i>Colver</i> , <i>Limcul</i> , <i>Lindub</i> , <i>Penlae</i> ; Ver: <i>Lancam</i> , ^a <i>Phylan</i> , <i>Verhas</i> , <i>Verstr</i> ; Vio: <i>Viocuc</i> , <i>Vioped</i> , <i>Viopub</i> , <i>Viosag</i> , <i>Viostr</i>
	<i>Eurema lisa</i> Boisduval & LeConte	—	Ast: <i>Astpil</i> , <i>Solnem</i> ; Fab: <i>Stybif</i> ; Lam: <i>Pycfle</i> ; Lyt: <i>Ammcoc</i> , <i>Lytala</i> ; Mal: <i>Sidspi</i> ; Scr: <i>Lindub</i> ; Ver: <i>Phylan</i> , <i>Verstr</i> , <i>Verurt</i>
	<i>Eurema nicippe</i> (Cramer)	<i>Xanthidia nicippe</i>	Ast: <i>Astpil</i> , <i>Cirvul</i> , <i>Eriphi</i> ; Bra: <i>Carbul</i> ; Fab: <i>Tripra</i>
	<i>Nathalis iole</i> Boisduval	—	Ast: <i>Asteri</i> , <i>Astpil</i> , <i>Bidari</i>
	<i>Phoebis sennae</i> (L.)	<i>Callidryas eubule</i>	Ast: <i>Astano</i> , <i>Astcor</i> , <i>Astpil</i> , <i>Cirdis</i> , <i>Heldiv</i> , <i>Verfas</i> ; Fab: <i>Bapalb</i> , <i>Meloff</i> , <i>Tripra</i> ; Mal: <i>Abuthe</i> ; Ver: <i>Verstr</i>
	<i>Pontia protodice</i> (Boisduval & LeConte)	—	Api: <i>Eribul</i> , <i>Eryguc</i> ; Asc: <i>Asctub</i> ; Ast: <i>Astano</i> , <i>Astlan</i> , <i>Astnov</i> , <i>Astpil</i> , ^a <i>Bolast</i> , <i>Cirvul</i> , <i>Corpul</i> , <i>Echpal</i> , <i>Echpur</i> , <i>Eupalt</i> , <i>Euppur</i> , <i>Eupser</i> , <i>Helhel</i> , <i>Rudsub</i> , <i>Rudtri</i> , <i>Silper</i> ; Bor: <i>Myover</i> ; Bra: <i>Capbur</i> , <i>Lepvir</i> ; Cam: <i>Lobspi</i> ; Car: <i>Sapoff</i> ; Dip: <i>Dipful</i> ; Eup: <i>Eupcor</i> ; Fab: <i>Meloff</i> , <i>Orbono</i> , <i>Tripra</i> , <i>Trirep</i> ; Lam: <i>Bleclil</i> , <i>Blehir</i> , <i>Marvul</i> , ^a <i>Monfis</i> , <i>Nepcat</i> , ^b <i>Prucul</i> , <i>Pycfle</i> , <i>Pycvir</i> ; Lyt: <i>Ammcoc</i> , <i>Lytala</i> , ^a Mal: <i>Malrot</i> , <i>Sidspi</i> ; Oxa: <i>Oenfru</i> ; Oxa: <i>Oxacor</i> ; Poly: <i>Polpen</i> ; Por: <i>Clavir</i> ; Ros: <i>Pruame</i> , ^a <i>Rubvil</i> ; Rub: <i>Cepocc</i> , <i>Houpur</i> ; Ver: <i>Lancam</i> , <i>Verhas</i> , <i>Verstr</i> , ^b <i>Verurt</i>
	<i>Zerene cesonia</i> (Stoll)	<i>Z. caesonia</i>	Ast: <i>Astano</i> , <i>Astnov</i> , <i>Astpil</i> , <i>Helgro</i> , <i>Liasca</i> ; Fab: <i>Dalpur</i> ; Lam: <i>Pycfle</i> ; Rub: <i>Cepocc</i>
Satyridae	<i>Cercyonis pegala</i> (F.)	<i>C. alope</i>	Api: <i>Eryguc</i> , <i>Hermax</i> ; Rub: <i>Cepocc</i>
	<i>Megisto cymela</i> (Cramer)	<i>Neonympha eurytus</i>	Ana: <i>Rhugla</i> ; Lam: <i>Pycfle</i> ; Lil: <i>Smiher</i> ; Rut: <i>Ptetri</i>

Plant families are abbreviated to three or four letters and species to the first three letters of genus and species names (see Table 1). Superscripts indicate plant species on which particular Lepidoptera species were listed by Robertson (1928) as "frequent" (^a) or "abundant" (^b).

^c It is possible that Robertson confused this species, which is usually restricted to forested areas, with *Celastrina neglecta* W. H. Edwards, which is known to occur in central Illinois (Bouseman and Sternburg 2001).

^d Plant species on which lepidopterans were feeding on exuding sap and flowers.

species (papilionids, pierids, and the danaid) are relatively large and slow-flying insects and therefore more easily collected or observed. Among the moths, the species recorded from the greatest numbers of plant species were the showy, and perhaps more conspicuous, arctiids. However, the swift-flying hesperids may go unnoticed, accounting for their relatively smaller number of host records.

The most common lepidopteran species were the pierids *Colias philodice* Godart (listed as abundant or frequent on 15 plant species of seven families; Table 2) and *Pontia protodice* (Boisduval & LeConte) (on six plant species of four families), and the nymphalid *Phyciodes tharos* (Drury) (on six plant species of three families). These three species apparently have expanded their ranges with the destruction of the eastern forests, and the spread of agriculture and their larval host plants (Opler and Krizek 1984, Sedman and

Hess 1985, Pyle 1998), many of which are exotic weeds (Mohlenbrock 1986). *Colias philodice* and *P. tharos* remain among the most common butterfly species in central Illinois today (Bouseman and Sternberg 2001). A congener of *C. philodice*, *C. eurytheme* Boisduval, was completely absent from Robertson's records, but is among the most common species in central Illinois today (Bouseman and Sternberg 2001). This species is native to the eastern United States, but has spread west with cultivation of alfalfa, *Medicago sativa* L. (Opler and Krizek 1984, Bouseman and Sternberg 2001). Similarly, the pierid *Artogeia rapae* (L.), a native of Europe, is much more common today because it has extended its range with cultivation of cruciferous crops (Opler and Krizek 1984, Bouseman and Sternberg 2001).

The most common lepidopteran species were also the most polyphagous (e.g., *C. philodice* and *D. plexip-*

Table 3. Proportion of species within the best represented lepidopteran families that were associated with the 15 most preferred plant species (yielding more than 16 lepidopteran species; Table 2)

Plant species	Plant family	Flower color	Total no. of Lepidoptera species	Proportion of species within families (rank)					
				Hesperiidae	Nymphalidae	Pieridae	Lycaenidae	Papilionidae	Mean rank
<i>Verbena stricta</i>	Verbenaceae	Pink	30	13.2 (1)	5.2 (2)	10.6 (2)	8.6 (2)	8.3 (3)	2
<i>Cephalanthus occidentalis</i>	Rubiaceae	White	29	8.8 (2)	7.8 (3)	8.5 (3)	11.4 (1)	8.3 (3)	2.4
<i>Pycnanthemum flexuosum</i>	Lamiaceae	White/green	29	7.7 (3)	11.7 (1)	10.6 (2)	11.4 (1)	2.8 (5)	2.4
<i>Monarda fistulosa</i>	Lamiaceae	Pink	23	7.7 (3)	7.8 (3)	4.3 (5)	0 (5)	11.1 (2)	3.6
<i>Trifolium repens</i>	Fabaceae	White	17	7.7 (3)	3.9 (6)	6.4 (4)	5.7 (3)	2.8 (5)	4.2
<i>Asclepias incarnata</i>	Asclepiadaceae	Pink	21	6.6 (4)	6.5 (4)	4.3 (5)	0 (5)	13.9 (1)	3.8
<i>Asclepias purpurascens</i>	Asclepiadaceae	Purple/pink	21	6.6 (4)	6.5 (4)	4.3 (5)	8.6 (2)	11.1 (2)	3.4
<i>Lithospermum canescens</i>	Boraginaceae	Yellow	18	6.6 (4)	6.5 (4)	4.3 (5)	2.9 (4)	5.6 (4)	4.2
<i>Aster pilosus</i>	Asteraceae	White	30	5.5 (5)	7.8 (3)	17.0 (1)	8.6 (2)	0 (6)	3.4
<i>Asclepias syriaca</i>	Asclepiadaceae	Pink	23	5.5 (5)	7.8 (3)	2.1 (6)	5.7 (3)	5.6 (4)	4.2
<i>Boltonia asteroides</i>	Asteraceae	White	20	5.5 (5)	5.2 (5)	6.4 (4)	11.4 (1)	0 (6)	4.2
<i>Silphium perfoliatum</i>	Asteraceae	Yellow	20	5.5 (5)	9.1 (2)	4.3 (5)	2.9 (4)	11.1 (2)	3.6
<i>Asclepias sullivantii</i>	Asclepiadaceae	Pink	19	5.5 (5)	3.9 (6)	2.1 (6)	11.4 (1)	2.8 (5)	4.6
<i>Trifolium pratense</i>	Fabaceae	Pink	20	4.4 (6)	5.2 (5)	10.6 (2)	2.9 (4)	11.1 (2)	3.8
<i>Eryngium yuccifolium</i>	Apiaceae	White/green	21	3.3 (7)	5.2 (5)	4.3 (5)	8.6 (2)	5.6 (4)	4.6

Flower color data are from Mohlenbrock (1986) and Ladd (1995). Plant species are arranged by increasing rank within the Hesperiidae.

pus, Table 2) suggesting that our measure of host specificity may be an artifact of sample size (Jervis et al. 1993). In fact, a positive linear relationship between host range of lepidopteran species reported by Robertson and the number of plant species on which they were listed as abundant or frequent (Fig. 1) supports the notion that abundant lepidopteran species tended to be observed visiting a greater number of plant species. Nevertheless, this correlation may also be due to polyphagous species simply being more abundant than species with narrower host ranges.

Robertson's data are valuable because they provide a qualitative assessment of lepidopteran abundance at the beginning of the 20th century, and may be compared with current data to identify changes in lepidopteran species abundance or host plant preference with alteration of habitats by humans. The data also have important implications for conservation of lepi-

dopteran species, which requires careful consideration of nectaring hosts of adults, as well as host plants of larvae (Opler and Krizek 1984). Availability of nectar is less critical for species that feed on nonfloral food sources (e.g., rotting fruit, tree sap, honeydew, dung, carrion; Opler and Krizek 1984, Bouseman and Sternberg 2001) or those that use a broad range of flower types, such as *Polites themistocles* (Latreille); however, some lepidopterans may depend on a few plant species for survival, such as *Harkenclenus titus* (F.) and *Poanes hobomok* (Harris) (Table 2). Butterfly "gardeners" could use Robertson's data to maximize the diversity of lepidopteran species by selecting plant species that have broad appeal, such as *V. stricta*. However, the structure of butterfly communities could be manipulated to some degree by assembling floral displays that include plant species that are the preferred nectaring hosts of a variety of individual lepidopteran species.

Table 4. Species diversity and level of nectar polyphagy for lepidopteran species collected by Robertson (1928)

Family	No. of species	No. of genera	No. of plant species visited	No. of plant genera visited	No. of plant families visited	Avg no. of plant species visited per lepidopteran species
Hesperiidae	25	16	145	95	36	5.80
Nymphalidae	16	10	127	77	33	8.74
Noctuidae	13	13	37	30	14	2.85
Lycaenidae	10	8	99	75	32	9.90
Pieridae	8	7	145	99	32	18.13
Sphingidae	7	5	23	20	15	3.83
Papilionidae	6	3	68	52	27	11.33
Sesiidae	4	3	6	6	4	1.50
Arctiidae	3	3	49	32	13	16.33
Pyralidae	3	3	4	4	3	1.33
Satyridae	2	2	7	7	6	3.50
Danaidae	1	1	61	39	15	61.00
Libytheidae	1	1	6	6	4	6.00
Zygaenidae	1	1	2	2	2	2.00
Mean	7.0	5.4	55.6	38.9	17.1	10.9
Standard deviation	6.9	4.8	53.7	35.0	13.0	15.4

Families are ranked in descending order by the number of species.

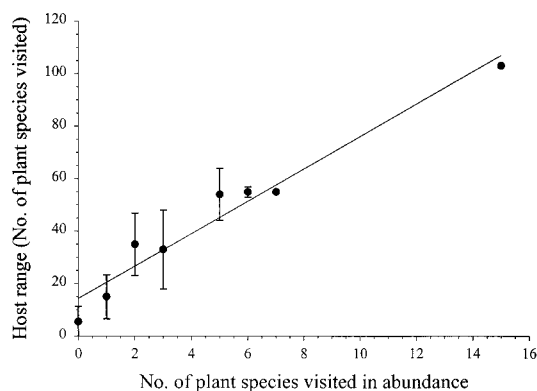


Fig. 1. Relationship between number of plant species on which lepidopteran species were abundant or frequent and the mean \pm SD number of plant species visited by each lepidopteran species. Data are for all 98 lepidopteran species; sample sizes were 66, 12, 11, 3, 2, 2, 1, and 1 for X values of 0, 1, 2, 3, 5, 6, 7, and 15, respectively. Best fit regression equation: $Y = 14.3X + 6.2$, $r^2 = 0.95$; $P < 0.0001$.

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