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UTAH STATE UNIVERSITY

ECOLOGY CENTER

Terrestrial Arthropods Series No. 1

APHIDS OF CURLEW VALLEY

George F. Knowlton
Professor of Entomology, Emeritus

Masters

A preliminary survey of the terrestrial arthropods of Curlew Valley, Box Elder County, Utah, and Oneida County, Idaho, was undertaken during 1969. Information secured on insects of this area was supplemented by a large amount of field survey and many specimens in the U.S.U. Insect Collection. An intensive ecological study of the desert breeding areas of the sugar beet leafhopper, Circulifer tenellus (Baker), was conducted by the writer, much of it in Curlew Valley, particularly from 1924 through 1937. A great many aphid collections were made during those years, and since, due to my special interest in the aphid fauna of Utah and the western region. Aphid records from the Utah portion of Curlew Valley are scattered through more than twenty publications. Most important of these is M. A. Palmer's "Aphids of the Rocky Mountain Region", 1952, The Thomas Say Foundation, Vol. 5, 452 pages. Two of the species of aphids here recorded were originally described from Curlew Valley.

The writer is especially indebted to Dr. Clyde F. Smith for his helpful suggestions concerning current names of genera and species, and for his cooperation over the years with particular regard to our earlier studies of "Capitophorus" aphids of Artemisia and Chrysothamnus. Others who have assisted with identifications and suggestions include: Professor M. A. Palmer, Dr. Merlin W. Allen,

The 1969 preliminary survey was conducted as Utah State University, Ecology Center Projects 31 and 31A, supported by NSF, Gifts and Grants funds.
Logan, Utah 84321

April, 1971

Dr. V. F. Eastop, Dr. D. Hille Ris Lambers, Dr. A. Grant Robinson, Miss Louise M. Russell, Mr. J. P. Doncaster, Dr. P. W. Mason, and the late Dr. Fred C. Hottes and Professor E. O. Essig. To each of these individuals I express sincere appreciation.

Localities: Utah localities in Curlew Valley, Box Elder County portion, include Cedar Creek, Cedar Hill, Curlew Junction, Deep Creek, Hansel Mountains, Hardup, Kelton (old townsite), Kelton Pass, Kosmo (old salt plant), Locomotive Springs, Rose Ranch, Snowville, and Wildcat Hills. Idaho localities in Oneida County included Black Pine, Curlew National Grasslands, Curlew Valley Reservoir, Holbrook, Holbrook Summit, Juniper, Ireland Canyon, Rock Creek, Spring Hills, Stone, "Stone Reservoir" more properly named Curlew Valley Reservoir, and Twin Springs to Roy Summit.

I am indebted to Dr. W. J. Hanson, Dr. D. W. Davis, Dr. G. E. Bohart, J. H. Judd, C. H. Smith, K. F. Wayland, K. Zollinger, J. F. Waldron, Mike, Scott and Ron Cazier, for assistance with survey and collection of arthropods in Curlew Valley.

APHIDS - Alphabetically arranged:

acanthovillisi, Pleotrichophorus Knowlton - Smith

Chrysothamnus viscidiflorus, described from Curlew Valley, Cedar Creek, Cedar Spring, Kelton Pass.

acophorum, Microsiphoniella (Knowlton-Smith)

Artemisia tridentata, Hansel Mts., Snowville.

aegopodii, Cavariella (Scopoli)

Wild umbellifers along Deep Creek, Kelton Pass, Snowville.

ambrosiae, Dactynotus (Thomas)

Iva xanthifolium, Deep Creek, Snowville, Curlew Valley Reservoir (=Stone Reservoir).

annulatus, Calaphis (Koch)

Betula alba, Snowville.

Aphalara sp.

Host (?) - Holbrook.

artemisiae, Microsiphoniella (Gillette)

Artemisia tridentata, Snowville, Curlew Valley Reservoir.

artemisicola (Artemisaphis) Obtusicauda (Williams)

Artemisia tridentata, throughout Valley, often very numerous. In stomach of lizard, Sceloporus g. graciosus.

artemisaphis, Macrosiphum Knowlton-Allen

Artemisia tridentata, Cedar Creek, Kelton Pass.

artemisiphilum, Obtusicauda (Knowlton-Allen)

Artemisia tridentata, Cedar Creek, Snowville, Hansel Mountains. In lizard stomach, Sceloporus g. graciosus.

arundinis, Hyalopterus (Fabricus)

Prunus, plums, Snowville.

atricornus, Epameibaphis Gillette-Palmer

Artemisia tridentata and in stomachs of chipping sparrow and rock wren; Hardup, Kosmo (old salt plant), Hansel Mts., Curlew Valley Reservoir. Present at Snowville along with tremendous numbers of Pseudoepameibaphis spp.

atriplicis, Hayhurstia (Linnaeus)

In folded Chenopodium album leaves, Cedar Creek, Hardup, Snowville, Stone.

avenae (= granarium), Sitobion (Fabricus)

Wheat, grasses, throughout Valley.

bakeri, Nearctaphis (Cowen)

Apple leaves, Snowville, Stone.

bonnevillensis, Brachyungus (Knowlton)

Greasewood, Sarcobatus vermiculatus, Kelton, Kosmo, Snowville, Black Pine,
Curlew Valley Reservoir, Stone.

brassicae, Brevicoryne (L.)

Mustards, radishes, Snowville, Holbrook, Stone.

bruneri, Periphyllus (Williams)

Populus, Stone.

californicum, Acyrtosiphum (Clarke)

Willow, Deep Creek, Stone.

canae, Styletaphis (Williams)

Artemisia tridentata, Snowville, Deep Creek.

carbocolor, Aphis Gillette

Rumex crispus, Snowville, Curlew Valley (Stone) Reservoir.

cardiui, (Acaudus) Brachycaudus (Linnaeus)

Plum, thistle, Snowville, Hansel Mts., Holbrook.

cefsmithi, Macrosiphum Knowlton - Allen

Artemisia tridentata, Cedar Spring, Showell.

chrysothamni, Styletaphis (Wilson)

Chrysothamnus nauseosus, Kelton, Kelton Pass, Snowville, Ireland Canyon,
Holbrook, Curlew Valley Reservoir.

chrysothamnicola, Styletaphis (Gillette-Palmer)

Chrysothamnus nauseosus, Curlew Valley Reservoir.

coweni, Obtusicauda (Hunter)

Artemisia tridentata, common, general.

craccivora, Aphis Koch (= medicaginis)

Alfalfa, sweet clover, Snowville, Stone, Curlew Valley Reservoir.

Craspedolepta sp.

In sweeps, Holbrook.

crataegifoliae, Nearctaphis (Fitch)

Crataegus, Snowville.

crenicornum, Kakimia (Smith-Knowlton)

Geranium richardsoni, Kelton Pass, Holbrook Summit.

dactylidis, Hyalopteroides (Hayhurst)

Orchard grass, Snowville.

dirhodum, Metopolophum (Walker)

Roses, Snowville, Holbrook, Stone.

eleagni, Capitophorus Gillette (=braggi)

In flight, Snowville.

elongatus, Pleotrichophorus (Knowlton)

Chrysothamnus nauseosus, Hansel Mts., Snowville.

eoessigi, Dactynotus (Knowlton)

Hollyhock, Snowville, Holbrook.

eriphori, Ceruraphis (Walker)

Snowball, Snowville.

euphorbiae, Macrosiphum (Thomas)

Rose, potato, Snowville, Holbrook.

escalanti, Dactynotus (Knowlton)

Chrysothamnus nauseosus, Cedar Creek, Hardup, Kelton Pass, Ireland Canyon,

Rock Canyon, and C. viscidiflorus at Holbrook.

essigi, Obtusicauda Solimon

Artemisia tridentata, Hansel Mts., Snowville.

essigi, Pseudoepameibaphis Knowlton-Smith

Artemisia tridentata, Kelton, Kelton Pass, Snowville, Curlew Valley Jct., Holbrook

fabae, Aphis Scolpoli

Beans, snowball foliage, table beets, Snowville, Holbrook.

filifoliae, Styletaphis (Gillette-Palmer)

Artemisia tridentata, Deep Creek, Snowville, Kelton Pass, Black Pine,

Ireland Canyon, Rock Creek, Curlew Natl. Grasslands, Curlew Valley Reservoir.

filifoliae, Macrosiphum Gillette-Palmer

Artemisia tridentata, Black Pine.

fitchi, Aphis Sanderson

Wheat, Snowville.

fraegefoliae, Chaetosiphon (Cockerell)

Roses, Snowville.

frangulae, Aphis Kaltenbach

Nepeta cataria, Snowville, Holbrook Pass.

frigidae, Empameibaphis (Oestlund)

Artemisia tridentata, Cedar Creek, Hardup, Snowville, Holbrook, Stone.

frigidae, Obtusicauda (Oestlund)

Artemisia tridentata, Kelton Pass, Snowville, Ireland Canyon.

glauca, Pseudoepameibaphis (Gillette-Palmer)

Artemisia tridentata, Hansel Mts., Kelton, Snowville, Stone.

gossypii, Aphis Glover

Rumex crispus, Deep Creek, Snowville.

graminum, Schizaphis (Rondini)

Wheat, Snowville, Holbrook.

gregalis, (Brachyungus) Aphis Knowlton

Chrysothamnus viscidiflorus, Hansel Mts., Cedar Creek, Snowville, Ireland Canyon, Holbrook.

gregarius, Pleotrichophorus (Knowlton)

Chrysothamnus nauseosus, Cedar Creek, Hansel Mts., Kelton, Kelton Pass,
Locomotive Springs, Holbrook Summit, Curlew Valley Reservoir.

helianthi, Aphis Monell

Helianthus annuus leaves, throughout Valley, many ants attending.

helichrysi, Brachycaudus (Kaltenbach)

Plum, rose, Snowville.

heraclella, Aphis Davis

Wild umbellifers, Kelton Pass, spotted hemlock at Curlew Valley Reservoir.

hermistonii, Brachyunguis (Wilson)

Artemisia tridentata, Snowville.

infrequens, Pleotrichophonus (Knowlton-Smith)

Artemisia tridentata, Kelton Pass, Snowville, Black Pine.

knowltoni, Aphis Hottes-Frison

Crowns of Oyster plant and dandelion, Curlew Valley Jct., Curlew Valley
Reservoir, Stone.

knowltoni, Flabellomicrosiphum Smith

Artemisia tridentata, Kelton Pass, Snowville.

lactucae, Hyperomyzus (Linnaeus) (=sonchi)

Wild lettuce, Snowville, Curlew Junction.

lanigera, Eriosoma (Hausman)

Apple twigs, Snowville.

ludovicianae, Macrosiphoniella (Oestlund)

Artemisia ludoviciana, Hansel Mts., Curlew Valley Reservoir, Ireland Canyon.

lugentis, Aphis Williams

Senecio, Kelton Pass, Ireland Canyon.

lupini, Aphis Gillette-Palmer

Lupinus, Holbrook Summit.

macrostachyae, Chaitophorus (Essig)

Salix, Curlew Valley Reservoir.

maculata, Therioaphis (Buckton)

Alfalfa, Snowville.

maid-radiciis, (Brachyunguis) Aphis Forbes

Sunflower roots, Snowville.

maidis, Rhopalosiphum (Fitch)

Corn, grass, Kelton Pass, Snowville, Holbrook.

medicaginis, Aphis = see craccivora

minutissima, Styletaphis (Gillette-Palmer)

Artemisia tridentata, Deep Creek, Snowville, Kelton Pass, Ireland Canyon,

Holbrook, Rock Creek.

nasturtii, Aphis Kaltenbach

Watercress, Locomotive Springs, Curlew Valley Reservoir.

negundinis, Periphyllus (Thomas)

Boxelder, Snowville, Stone.

neomexicana, Aphis (Cockerell)

Black currant, Snowville.

nervata, Wahlgreniella (Gillette)

Roses, Snowville, Holbrook, Stone.

nigra, Chaitophorus Oestlund

Salix, Curlew Valley Reservoir.

nigraregalis, Aphis Knowlton

Chrysothamnus nauseosus, Hansel Mts., Snowville, Curlew Junction, Ireland

Canyon; C. viscidiflorus, Cedar Hill, Holbrook, Curlew Valley Reservoir

nigrae, Chaitophorus Oestlund

Salix, Curlew Valley (Stone) Reservoir.

nymphae, Rhopalosiphum (Linnaeus)

Watercress, Locomotive Springs, Curlew Valley Reservoir.

Obtusicauda spp.

Artemisia tridentata, Hansel Mts., Black Pine, Holbrook Summit.

oenotherae, Aphis Oestlund

Evening primrose, Snowville.

oestlundii, Pleotrichophorus (Knowlton)

Chrysothamnus nauseosus, Cedar Creek, Kelton Pass, Hardup, Snowville, Hansel Mts., Curlew Valley Reservoir, Holbrook, Stone, Curlew Ntl. Grasslands, Ireland Canyon, Juniper.

olivacea, Forda Rohwer

Grassroots, crested wheat grass roots, Snowville, Deep Creek, Black Pine, north edge of Curlew Valley Grasslands, south of Roy.

oregonensis, Styletaphis (Wilson)

Artemisia tridentata, Snowville, Deep Creek, Holbrook, Curlew Valley Reservoir.

oregonensis, Microsiphoniella (Wilson)

Artemisia tridentata, Snowville, Hansel Mountains.

packi, Pleotrichophorus (Knowlton)

Chrysothamnus nauseosus, Snowville, Curlew Valley Reservoir, Juniper.

Pemphigus sp.

Host (?), Curlew Valley Reservoir.

persicae, Myzus (Sulzer)

Potatoes, round-leaf mallow, hollyhock, many hosts, throughout the Valley.

pisum, Acyrtosiphon (Harris)

Alfalfa, sweet clover, Snowville to Kelton Pass, Stone, Juniper, Holbrook, Curlew Valley Reservoir.

pomi, Aphis De Geer

Apple, Snowville, Stone.

populicola, Thomasiella (Thomas)

Poplar, Snowville, Stone.

prunifoliae, Rhopalosiphum (Fitch)

Plum, Snowville.

pseudobrassicae, Dactynotus (Davis)

Mustard, Snowville.

pseudoglandulosus, Pleotrichophorus (Palmer)

Artemisia tridentata, Kelton Pass, Holbrook Pass.

pustula, Cavariella Essig

Salix, Curlew Valley (Stone) Reservoir.

pustulatus, Chaitophorus H. R. Lambers

Salix leaves, Stone, Curlew Valley Reservoir.

pycnorhysus, Pleotrichophorus (Knowlton-Smith)

Chrysothamnus viscidiflorus, Gutierrezia, Curlew Junction, Stone, Holbrook.

quadritrichus, Pleotrichophorus (Knowlton-Smith)

Artemisia tridentata, Snowville, Kelton.

ribiella, Amphorophora (Davis)

Black currant, Snowville.

ribis, Cryptomyzus (Linnaeus)

Red currant, Snowville.

robinae, Myzocallis (Gillette)

Locust, Snowville.

rosae, Maculolachnus (Cholodkosky)

Rosa fendleri, Deep Creek, Stone.

rosae, Macrosiphum (Linnaeus)

Roses, Snowville.

roseus, Dysaphis (Baker)

Apple, Snowville.

rumicis, Aphis Linnaeus

Beans, Rumex, snowball, Snowville, Curlew Valley Reservoir.

salicicola, Chaitophorus Essig

Salix, Snowville, Curlew Valley Reservoir.

salicis, Pterocomma (Linnaeus)

Salix, Deep Creek, Snowville.

salignus, Tuberolachnus (Gmelin)

Salix bark, Snowville.

setariae, Aphis Thomas

Plum, Snowville.

sibiricum, Macrosiphum (Mordvilko)

Urtica gracilis, Snowville, Stone.

smithiae, Pterocomma (Monell)

Salix, Snowville, Stone.

(solanifolii, Mac. =) euphorbiae, Macrosiphum

spiraecola, Aphis Patch

Spirea, Snowville.

sporadicum, Pleotrichophorus (Knowlton)

Chrysothamnus nauseosus, Snowville, Locomotive Springs.

symphoricarpi, Brevicoryne (Thomas)

Snowberry, Holbrook Pass.

taraxaci, Dactynotus (Kaltenbach)

Dandelion, Snowville.

tetradymia (?), Aphis (Knowlton)

Tetradymia, Hansel Mountains.

N. sp., Pleotrichophorus Smith-Knowlton

Tetradymia, Hansel Mountains.

torticauda, Bipersona (Gillette)

Cirsium, thistle, Hansel Mts., Snowville, Ireland Canyon, Holbrook Summit.

tridentatae, Flabellomicrosiphum Wilson

Artemisia tridentata, Snowville, Black Pine, Curlew Valley Reservoir,
Curlew National Grasslands.

tridentatae, Pseudoepameibaphis (Wilson)

Artemisia tridentata, Deep Creek, Snowville, Kelton Pass, Hansel Mts., Black
Pine, Stone, Holbrook, Curlew Valley Reservoir, Curlew National Grasslands.

utahensis, Chaitophorus (Knowlton)

Salix bark, Deep Creek, Snowville, Curlew Valley Reservoir, Stone.

utahensis, Drepanaphis, Knowlton-Smith.

Acer grandidentatum, Holbrook Summit.

utahensis, Durocapillata Knowlton

Chrysothamnus viscidiflorus, Curlew Valley Jct., Rose Ranch, Snowville, Holbrook.

utahensis, Epameibaphis Knowlton-Smith

Artemisia tridentata, Kelton Pass, Hardup, Hansel Mts., Black Pine, Holbrook,
Curlew Valley Reservoir.

utahensis, Pleotrichophorus (Pack-Knowlton)

Gutierrezia serotbrae, Chrysothamnus viscidiflorus, Curlew Jct., Snowville.

varians, Aphis Patch

Black currants, Snowville.

viburnicola, Ceruraphis (Gillette)

Snowballs, Snowville.

viminalis, Chaitophorus Monell

Willows, Snowville, Curlew Valley Reservoir.

wasatchi, Pleotrichophorus (Knowlton)

Chrysothamnus, Curlew Junction.

xanthii, Capitophorus (Oestlund)

Xanthium orientale, Snowville, Holbrook, Curlew Valley Reservoir.

xerozoous, Pleotrichophorus (Knowlton-Smith)

Chrysothamnus nauseosus, Snowville, Locomotive Springs, Curlew Valley Reservoir, Stone, Holbrook.

zerogutierrezis, Macrosiphum Smith-Knowlton

Gutierrezia, Curlew Valley.

zerothermum, Macrosiphum Knowlton-Allen

Artemisia, described from Kelton, Cedar Creek.

zerozalphum, Macrosiphum Knowlton (=geranii?)

Erodium cicutarium, Snowville, Kelton Pass.