spot a single specimen of *Amblyscirtes aenus.* Later same day, Madera Canyon, Santa Rita Mts.: *Euptychia rubricata* (worn), *Thorybes pylades* (abundant), *T. drusius* (1), *Erynnis funeralis* (few), one *Achalarus casica,* and one *Amblyscirtes eos.* Weather was exceedingly hot; even local residents complained.

Contributors: D. L. BAUER; J. D. EFF; L. M. MARTIN; J. A. POWELL; F. W. PRESTON; O. E. SETTE; S. R. SMOKER; F. T. THORNE; J. W. TILDEN.

Los Angeles County Museum, Exposition Park, Los Angeles, Calif., U.S.A.

2. NORTHWEST — OREGON, WASHINGTON, IDAHO

by J. C. HOPFINGER

After a normal winter in most sections, the summer was unusually dry. Collecting was for the most part average or less than average in quality. No widespread migrations were reported, but certain migrant species, such as *Nymphalis californica* and *Vanessa* spp., were recorded as being locally abundant.

OREGON

The only report received was from L. M. SCOTT of Portland, who states that a cool winter and rainy spring resulted in poor collecting in the western part of the state. *Papilio multicaudatus* was taken in early May near The Dalles, Wasco Co. In June near Estacada, Clackmas Co., *Speyeria leto, Euphydryas colon,* and *Pieris napi* were all rather abundant, *Parnassius clodius* was in fair numbers, and *Papilio rutulus* was rather scarce. In the Mt. Hood area *Nymphalis californica* was very abundant; several species of *Speyeria* were present in late August.

WASHINGTON

WALLA WALLA DISTRICT. The excellent report by WILLIAM C. COOK is given in full:

This past year my Phalaenid collecting has been almost wholly confined to light trapping at Walla Walla and at Twin Falls, Idaho. No field collecting was done.

Last winter was somewhat below normal in temperature, but this was followed by weather warmer than normal in spring and summer. Five of the six months between March and August were drier than normal. This warm summer weather appeared to speed up the production of broods in those species which have more than one brood, and the drought was somewhat unfavourable for some of the true cutworms that are double-brooded.

Collecting as a whole was very poor. At Walla Walla only 1929 moths, or an average of 24.4 per night, were taken. This is the lowest average I have obtained in 8 years of trapping, and is about half the normal number of moths. At Twin Falls, the trap run by J. R. DOUGLASS captured 9.4 moths per night, which is also about one-half of the 8-year average.

The following tabulation gives the data on the more abundant species at both places:

WALLA WALLA, WASH. TWIN FALLS, IDAHO

1. Species more common than in 1951

Species	Dates of occurrence	Species	Dates of occurrence
Euxoa septentrionalis	Aug.-Sept.	*Euxoa laetificans*	July-Oct.
Euxoa tessellata	June-July	*Euxoa declarata* group	Aug.
Feltia ducens	Aug.-Sept.	*Feltia ducens*	July 21-Sept. 30
Lycanades purpurea	October	*Crymodes devastator*	June 11-Sept 10
Crymodes devastator	July-Aug.	*Heliothis obsoleta*	July 21-Sept. 10
Schinia 6-plagiata	Aug.	*Autographa brassicae*	May through August, no definite broods.

2. Species about the same as in 1951

Peridroma saucia	*Euxoa olivia*
Graphiphora c-nigrum	*Euxoa tessellata*
Scotogramma trifolii	*Agrotis vetusta*
Eriopyga curtica	*Graphiphora c-nigrum*
Xylomiges rubrica	*Scotogramma trifolii*
Ceramica picta	*Lacinipolia stricta*
Leucania farcta	*Oligia fractilinea*
Septis arctica	*Laphygma exigua*
Platyperigea extima	*Heliothis phloxiphaga*
Stibadium spumosum	*Autographa simplex*
Heliothis phloxiphaga	
Heliothis obsoleta	
Autographa simplex	
Autographa californica	
Caenurgina erechtea	

3. Species less common than in 1951

Euxoa olivia	*Euxoa messoria*
Euxoa catenula	*Euxoa septentrionalis*
Euxoa sponsa	*Euxoa ochrogaster*
Euxoa messoria	*Leucania farcta*
Euxoa atomaris	*Platyperigea extima*
Mamestra configurata	*Autographa californica*
Xylomiges curialis	*Oligia tonsa*

NOTES:

Some interesting developments among the common species were:

Euxoa ochrogaster, which has been of economic importance in parts of Washington, Oregon, and Idaho during the past two years, was reduced to its normal status this season, and no complaints or larvae were received.

Euxoa septentrionalis, which has no economic record other than in Oregon in 1951 on alfalfa, was very abundant around Walla Walla in 1952, but no complaints were received.

The fall brood of *Platyperigea extima,* which is usually larger than the spring brood, was nearly suppressed by the dry summer conditions. Over 600 moths of the first brood were captured, but only 114 of the fall brood.

Apparently *Autographa californica* had an extra brood because of the warm weather, and the fall brood occurred at just the right time to do severe damage to fall spinach. Usually this species comes on just enough later than the spinach so that harvesting is over before many of the larvae are large.

Heliothis obsoleta was more than usually abundant in sweet corn around Walla Walla, although this is not indicated by the light trap record.

Euxoa sponsa and *E. messoria,* two of our commonest garden cutworms, have been low in numbers for several years. If they do not increase before many seasons, I will begin to think that the widespread use of DDT for other purposes has built up enough in the soil to kill off the young larvae. This is purely a surmise. The species of *Xylomiges* which live on fruit trees also are all low in numbers, possibly because of efficient insecticides used on other insects.

CENTRAL WASHINGTON. L. S. PHILLIPS records 38 species of butterflies taken in the first week of July, and quotes Mrs. EMILY HENRIKSEN as saying the collecting was very poor. Due to a severe illness Mrs. HENRIKSEN has been unable to submit her usual valuable report.

NORTH-CENTRAL WASHINGTON. The Area Co-ordinator reports: The winter 51-52 was mild, with only one near zero spell during the first part of January. Early species were on the wing during the first week in April. On the 20th of the month, of the early Pieridae, only *Pieris sisymbrii* appeared in any numbers. *P. beckeri* and *P. occidentalis* were very scarce. *Euchloe creusa* was in good numbers, *E. ausonides* nearly absent. *Anthocaris sara,* usually fairly common, was nearly absent, only 2 males being taken. Two weeks later *Melitaea sterope,* usually fairly abundant, was represented by only 3 pairs. All Lycaenidae were scarce, with the exception of *Philotes battoides,* which was abundant along the wet sands of the Columbia River. By the end of May at some 1000 ft. elevation all local Lycaenidae were plentiful: e.g., *Plebeius montis* and *P. melissa,* but *Phaedrotes piasus* was scarce. *Coenonympha elko, Phyciodes mylitta,* and *Euphydryas anicia* were in good numbers. All *Papilio* were scarce at this elevation. *Oeneis nevadensis* was beginning to appear. *Phyciodes tharos* made a remarkable recovery from the effects of the 1948 flood, which nearly exterminated it. Along the Columbia at suitable places it was present in its former abundance. *Apodemia mormo,* also a victim of the flood, was absent and may be extinct in its former habitats along the river. By the beginning of June, *Oeneis nevadensis,* true to its 2-year cycle, showed up very well in its habitats. *Erebia episodea* at the lower elevations was well represented. *Limenitis lorquini* was much reduced in numbers. The remarkable thing was the nearly total absence of all *Cercyonis,* usually not at all hard to find. Of *Speyeria* only *coronis garretti* had a good flight in the lower country. *Strymon acadica* was common, as was *Callipsyche behri.* A few *Satyrium fuliginosa* showed up after years of absence. *Colias edwardsi* was still moving south, as a female was taken near town, the first one in nearly 40 years of collecting. In the middle of

July, ANDERSON reports, at an elevation of some 4000 ft. *Erebia vidleri* was absent, *Speyeria mormonia* was common, *Euphydryas anicia* was old and worn, *Plebeius saepiolus* common, *Oeneis chryxus* in the usual few specimens, there was a scattering of *Parnassius, Speyeria atlantis* was scarce. By August 1, at Harts Pass, elevation 6200 ft., *Parnassius* was getting worn, with *P. clodius* in good numbers, *P. smintheus* scarce. Of *Erebia vidleri* few were in flight, and these were getting worn, *Speyeria mormonia* was common, *S. rhodope* much less abundant than in former years, *Boloria chariclea rainieri* was common, *B. epithore* much less in evidence. During August and up to the middle of September *Papilio oregonia* continued to be common, as for the past several years. On October 15 a good flight of *Vanessa cardui* showed up at the house, all fresh new specimens, with a good sprinkling of *V. carye.* The latter seem to prefer a spot under one of my shade trees, where they show up year after year. It is never common here. All in all, I would call the season average.

COASTAL REGION. JAMES C. PEARSON reports as follows: The winter of 1951-1952 was not unusual, freezing periods, wet periods and average temperatures were within the normal. 1952 as a whole was a record dry year with summer weather extending through October. However, it was not particularly hot.

I have noted daily abundance of the species I have seen for the past seven seasons. Comparing with these, I find that about Seattle in 1952: *Pieris rapae* was more numerous than usual throughout the season; *Nymphalis antiopa, Vanessa cardui,* and *N. milberti* were more common than I have ever observed them, *V. cardui* larvae infesting the gardens during July and the first half of August and the butterflies flying in tremendous numbers all fall; *Lycaena helloides* and *Phyciodes mylitta,* both of which usually appear in the spring and are common in late summer, were observed only once in the spring, each about a month later than usual, and in the fall very seldom, also a month late. Common Seattle species that appeared in average quantity were: *Papilio rutulus, Nymphalis californica, Vanessa atalanta, V. carye, Limenitis lorquini, Anthocaris sara, Incisalia iroides, Pyrgus ruralis,* and *Ochlodes sylvanoides.*

Here are summaries of collecting trips:

Mt. Si, King Co. (4000 ft.) still had a little snow on May 30 and very few of the alpine flowers were blooming yet. I found many *Vanessa cardui* and *Erynnis* (species?), a few *Hesperia juba* and Blues, and a single *Parnassius clodius, Anthocaris sara,* and *Incisalia iroides.* On August 13 there were abundant *Speyeria hydaspe, Euphydryas taylori, Lycaena mariposa* (ragged), *Vanessa carye, Nymphalis californica,* and Blues, plus some *Speyeria mormonia, Boloria epithore, Nymphalis milberti, Parnassius clodius,* and *Ochlodes sylvanoides.*

Yakima Park, Mt. Rainier, had snow patches and limited alpine flowers on July 5. On a fine day I observed two *Nymphalis milberti* and dozens of fresh *Euphydryas taylori,* but no other species.

At Packwood, Lewis Co., where I collected on July 5, 1947, and July 6, 1952, the country was much drier this year, with *Speyeria coronis simaetha*

much more common. There were many *Papilio rutulus, P. eurymedon,* and *Parnassius clodius,* and a few *Speyeria cybele pugetensis, Pieris rapae, Vanessa carye,* and *Nymphalis milberti.*

The first trip I have taken to Tenino, on July 7, was a tremendous disappointment. I found only a number of common species in worn condition, and a dozen *Coenonympha insulana.* I could find no trace of *Euphydryas anicia.*

Near Mt. Baker Lodge (4400) on August 27 and 28 most of the specimens were slightly worn. All but *Nymphalis californica* and a few *Boloria* were limited to flowered slopes facing south, most other slopes being covered with heather. There were abundant *N. californica, Boloria epithore, Boloria rainieri, Lycaena mariposa,* and Blues, a few *Speyeria hydaspe, S. mormonia, Euphydryas taylori, Nymphalis milberti, Vanessa carye, Pieris rapae,* and *Parnassius clodius* (small specimens), and single *Erebia vidleri* and *Polygonia.*

I collected at Sloan Peak, Snohomish Co., on September 23. The area was very dry by this time. Battered *Nymphalis californica* were found up to 4000 ft. and swarms of fresh *Polygonia* were about the stream banks as high as I went, 6000 ft. At this elevation there were also mostly worn specimens of *Speyeria mormonia, S. hydaspe, Boloria epithore, Nymphalis milberti, Lycaena mariposa, Parnassius,* and Blues.

Fresh *Polygonia* were numerous at Snoqualmie Pass and Beckler River on September 14, and at Sloan Peak and Monte Cristo on September 23 and 24. There were many *Cercyonis alope* at Pipe Lake on August 3. I found two *Hesperia juba* at Pipe Lake on June 1 and four on Mercer Island on September 10.

PUGET SOUND AREA. DON P. FRECHIN reports: Diurnal collecting was extremely poor with a few exceptions. Spring collecting, usually most productive, was very disappointing. The following species were flying in greatly reduced numbers: *Anthocaris sara, Pieris napi, Coenonympha tullia, Boloria epithore, Euphydryas editha, Phyciodes tharos, P. mylitta,* all *Polygonia, Strymon melinus. Incisalia* was at its lowest ebb, with *I. iroides, I. polios,* and *I. eryphon* almost nonexistent. *Callophrys viridis* was almost totally absent. *Lycaena helloides, Everes amyntula, Plebeius icarioides, Glaucopsyche lygdamus, Lycaenopsis pseudargiolus* evidenced a subnormal flight, but not as markedly reduced as other Lycaenidae. All Hesperiidae were greatly reduced in numbers. The only bright spot in the Spring flight was the showing of *Mitoura johnsoni.* In the Olympus Mts., *M. nelsoni* was slightly below normal. Summer collecting, never very good at low levels here, was practically non-existent. *Speyeria cybele pugetensis* had its poorest year. *Neophasia menapia* was the only species to appear in above-normal numbers, it having been absent here for years. Collecting in the Cascades in July was much more productive. Good series of *Parnassius clodius* and *Boloria epithore* were taken. *Plebeius icarioides* was again very abundant. A colony of *Lycæides argyrognomon* was located on top of Stevens Pass. *Papilio eurymedon* and *P. rutulus* were abundant.

BRITISH COLUMBIA

RICHARD GUPPY'S report from Vancouver Island was the only one received, and is given in full:

The 1951-1952 winter was nearly normal, April and May were favourable, but June was unusually cool, though rainfall was still below normal. Snow fell at 3000 ft. about June 10 with effect on early Lepidoptera as yet unascertained. I had collected at that altitude on May 27 and found all early butterflies in full flight.

1951 and 1952 will go down in the records as practically a two-year drought, but I do not think that insects were seriously affected in 1952. June was cool and evidently very favourable to plant growth. July was hot, but August and September were cool with enough showers to keep herbage from becoming parched. October and November, though both months were the driest on record, were likely not that way from the point of view of insect life. Showers, mist and fog do not show much in the rain gauge, but they keep the soil damp.

For this year the general trend of butterfly populations can be very nicely summed up. Species flying in May or earlier were all down in numbers. Summer collecting was uniformly good. Double-brooded species showed a decline in the early brood, with fair to good recovery in the summer generation. Deviations from the above trends were as follows.

SPRING BUTTERFLIES: *Lycaenopsis pseudargiolus* and *Everes amyntula* were as abundant as usual. A few specimens of *Mitoura* (*nelsoni ?*) were taken, compared with none in 1951.

SUMMER BUTTERFLIES: *Speyeria zerene* and *S. hydapse* were somewhat less abundant than last year, though still plentiful. *Neophasia menapia* showed no noticeable increase. The most striking increases were shown by *Limenitis lorquini, Cercyonis alope,* and *Ochlodes sylvanoides.* Although I was not able to follow *Oeneis nevadensis* through its normal season, indications at the end of May and early in July lead me to believe that the usual biennial flight showed up as well or better than in 1950.

NYMPHALID MIGRATIONS this year seem worthy of special note. A spring migration of *Vanessa cardui* arrived. These early migrants were very ragged by July; at this time some fairly fresh specimens were seen, coincident with a general increase in the *V. cardui* population. Either a second migratory wave arrived, or two generations developed during the season. The second guess seems the most likely to be accurate. A late brood came out during August and September. All these late butterflies were extremely fresh and brightly colored, very quiet and easily netted, in strong contrast to the earlier brood.

Along with the late *V. cardui* were a fair number of *V. carye.* These were also very fresh specimens, presumably the offspring of a spring migration which had passed unnoticed. This is the first record I have of *V. carye* appearing in anything approaching fair numbers.

The first *Nymphalis californica* migration since 1945 appeared in late August. Not many individuals reached as far north as Wellington. Around Victoria in early September they appeared quite common. All specimens taken were worn and tattered.

No Saturniidae were seen, and no Sphingidae except a few *Hemaris diffinis.* Nearly all Arctiidae were scarce or absent, including the usually abundant species. An exception to this trend was *Leptarctia californiae,* which was seen quite frequently during collecting at high altitudes. In previous years I have always failed to find it in the same locality. One adult and one larva of *Halisidota argentata* were found, these the first seen for several years.

July was the only month favourable for Phalaenidae. August and September nights were frequently cool. During July, *Cerura scolopendrina* came to light quite frequently, this species previously represented in my collection by two specimens taken in 1948. *Autographa celsa* appeared fairly abundant, and largely replaced the usually common *A. californica.*

In Geometridae a very noticeable circumstance was the decline in *Mesoleuca gratulata,* usually an excessively abundant diurnal species.

Only very few autumn-flying geometrids were seen. During December the weather was exceptionally mild, but *Erannis vancouverensis* failed to appear, after having been seen last year. *Operophtera occidentalis* had a wonderful season, still around at time of writing, December 23, a full month after its first appearance.

Contributors: W. C. COOK; D. P. FRECHIN; RICHARD GUPPY; J. C. HOPFINGER; J. C. PEARSON; L. S. PHILLIPS; L. M. SCOTT.

Brewster, Wash., U.S.A.

3. ROCKY MOUNTAINS — ALBERTA, MONTANA, WYOMING, UTAH, COLORADO, NEW MEXICO

by J. DONALD EFF

The winter of 1951-52 was an excellent one, with sufficient moisture throughout most of the area. The Big Horn area of north central Wyoming had a dry, early spring, but Colorado and New Mexico opened the collecting season about on schedule. Both states enjoyed good rainfall. The month of May in the Denver area was about the wettest in a good many years, giving the earth a luxuriant coat of green which should have provided the larvae of the earlier species with a plentiful supply of their favorite food plants. However, unlike New Mexico which enjoyed fairly good rainfall