A LIST OF LAND BIRDS FROM CENTRAL WASHINGTON.

BY ROBERT E. SNODGRASS.

During the summer of 1902 the Washington Agricultural College equipped and maintained in the field for one month, a biological collecting expedition. The material obtained includes principally mammals, birds, reptiles, fishes, insects and plants. The birds are given in the appended list.

The region selected as the basis of exploration is the old dry canon of the Columbia River in the northeast quarter of Douglas County, known as the Grand Coulee. This is simply a great gorge fifty miles long and from one to two miles wide, cut down three hundred to five hundred feet into the enormous layers of basalt that form the top of the country throughout central and southeast Washington.

Although the Grand Coulee is now dry, with the exception of scattered, mostly alkaline lakes, having neither outlets nor inlets, it certainly at one time was nothing less than the channel of the Columbia River. There is no doubt that the latter, during glacial times, was so dammed up to the west that its original course became entirely closed. Its waters then rolled back upon themselves and a great lake was formed between the mouths of the Sans Poil and Okanogan Rivers. When this became too great for its embankments, an outlet stream started off overland to the southwest. This, however, soon cut for itself a channel in the soft basalt rock, and before the glaciers released the dammed up waters of the lake and let them once more follow their natural course in a great bend to the west and south, this short-cut stream had formed the Grand Coulee. It met the old river bed far to the southwest, near the Saddle Mountains and just south of where the Northern Pacific Railroad now crosses the Columbia. returning to its old course the river has cut its cañon down five or six hundred feet below the floor of the Coulee. This has given to the people living in this region the notion that, if water ever did flow through the Grand Coulee, it must have gone north and not south.

The Grand Coulee is, then, simply what was once a temporary short-cut for the Columbia River around the eastern face of the glaciers. Its walls, except in the neighborhood of Coulee City, are vertical cliffs rising in places probably between four hundred and five hundred feet. Their bases are everywhere hidden behind high banks of talus. This talus is continually accumulating, and is almost everywhere so new that it consists of angular fragmental material. At Coulee City, only, the walls of the Coulee are low and sloping. They are here worn down to such a gentle inclination that the Central Washington Railway is graded nearly across the cañon. At only four other places has it been possible to construct a wagon road or even a trail out of the Coulee.

Of course the mere geological interest of the Grand Coulee cannot make it of any biological importance. However, the fact that its floor is only in a few places capable of cultivation, has caused it to be left, by the advancing flood of wheat that has overwhelmed much of the Big Bend country, almost intact and in its original, native, undisturbed condition. It is a sunken biological oasis in a desert of wheat fields. Nothing can be more distressing to a naturalist than to travel across the Big Bend country and for a whole day to see not one square foot of Nature's original sagebrush verdure; to camp at night on a strip of land a few feet wide between a dusty road and a barbed-wire fence; and to 'bum' wood and water from a neighboring farm-house. Not even are there willow- and weed-fringed streams in the depressions between the hills. There is nothing left of Nature but the air and the dust of the road.

This desolateness, however, is occasionally relieved by coming upon great stretches of most refreshing 'scab-land' country. Such areas alternate with the wheat deserts in Lincoln County and occupy also a large space along the eastern edge of the Grand Coulee. On them there is scarcely any soil, only enough for sagebrush to grow on. The surface is cut by erosion into irregular hollows, low hills, abrupt walls, ridges and small tower-like buttes. A weird and wild aspect has this country — Nature's reserve for the naturalist. In the hollows are scattered about small densely alkaline lakes whose waters have a beautiful greenish-black color by transmitted light. The traveler on these strips is never

haunted by the distressing expectation of finding drinking water. The wild and formidable nature of the country is sometimes trampled on by bands of grazing cattle, but nowhere does it and never will it submit to the hideous insult of being made to support a wheat field or a farm-house. The Sage Sparrow, the Sage Thrasher and the Horned Toad live in perfect tranquillity, for no fear have they that their children's children or great-grandchildren will here ever be subjected to the shame of living on else than the sage-brush of their fathers.

To the student of geographical distribution the Big Bend fauna must be of special interest, since the country represents the northern limit of the sage-brush region in the Northwest. Immediately to the north of the Columbia River arise the low but pine clad Okanogan Mountains. On the west the sage-brush is limited by the Cascades. On the east it is bounded to the north by the region of small pines occupying Spokane County, and to the south by the (naturally) bunch-grass covered hills of the Palouse country. Collecting in the Grand Coulee possesses a great attractiveness due to the intrinsic interest of the region it represents, and, furthermore, it is enhanced through the variety given to the fauna by numerous small reedy marshes scattered through the cañon.

Numerous water birds breed in the Coulee, but we did not have time to devote much attention to them. We have specimens of the following species: Anas boschas, Erismatura jamaicensis, Fulica americana, Tringa maculata, and Ægialitis vocifera.

Specimens of most of the species recorded in the following list were secured. Some were merely seen, but such are so described, and in most cases the identification could not be mistaken. Where doubtful, the doubt is indicated. The paper by W. L. Dawson on the Birds of Okanogan County, referred to several times in the list, is that published in 'The Auk' for April, 1897, pages 168-182.

- I. Pediœcetes phasianellus columbianus. Columbian Sharp-tailed Grouse (known here in the Northwest as 'Prairie Chicken'). None of these were met with in the Coulee region, but several individuals were seen at Crab Creek and a whole family at Sprague in the southeast part of Lincoln County. They are or have been plentiful throughout the whole southeastern part of the State.
 - 2. Centrocercus urophasianus. SAGE HEN. These great birds are

reported to be common throughout Douglas County. We obtained three specimens—an adult female and two young—from a small band of them southeast of Coulee City. None were seen in the Grand Coulee and we were told by inhabitants that they never come down into the cañon.

- 3. Zenaidura macroura. Mourning Dove.—Rather common throughout the Big Bend country. Several nests were found on the ground in the sage-brush.
- 4. Cathartes aura. Turkey Vulture. A number seen flying about in the Coulee. Observed as far north as the Columbia River.
- 5. Circus hudsonius. Marsh Hawk. Several seen in the Coulee flying above the small marshes.
- 6. Accipiter cooperi. Cooper's HAWK.—Rather common along the high cliff walls of the Coulee, keeping generally above shot-gun reach.
- 7. Buteo borealis calurus. Western Red-tail. Common everywhere.
- 8. Falco sparverius deserticolus. Desert Sparrow Hawk. Common everywhere along the cliffs of the Coulee, nesting in holes high up on the walls.
- 9. Asio wilsonianus. American Long-eared Owl. Not seen in the Coulee region. Common along Crab Creek in Lincoln County.
- 10. Bubo virginianus pallescens. Western Horned Owl. Only two individuals of this owl were seen: one was in the wheat fields near Wilbur in the northwest part of Lincoln County, the other was at Crab Creek in the southwest part of the same county. Although neither was secured there can be little doubt as to the variety since this is the resident form about Pullman in Whitman County.
- 11. Speotyto cunicularia hypogæa. Burrowing Owl. This owl is common throughout the central and southeastern part of the State.
- 12. Ceryle alcyon. Belted Kingfisher. Several observed at Crab Creek in Lincoln County. None met with in the Coulee.
- 13. Melanerpes torquatus. Lewis's Woodpecker. One specimen obtained in the pines that occur sparsely scattered about in the north end of the Grand Coulee. The granite underlying the basalt is exposed as rough hills on the floor of the Coulee for eight miles south from the head. On this granite there grew a few evergreens, mostly small trees of *Pinus ponderosa*.
- 14. Colaptes cafer collaris. RED-SHAFTED FLICKER. Several Flickers were heard in the pines of the northern end of the Coulee and one or two were seen, but no specimens were obtained. It is probable that they were of the form named, for Dawson records it from Okanogan County just north of here.
- 15. Phalænoptilus nuttallii. Poor-will.—Abundant both in the Coulee and over the region southeast of it. Found specially numerous at Crab Creek in Lincoln County. According to Dawson, this bird in Okanogan County "is confined to semi-arid regions in valleys and 'draws.'"

- 16. Chordeiles virginianus henryi. Western Nighthawk.— Very common throughout the Big Bend country.
- 17. Tyrannus tyrannus. KINGBIRD.—Common throughout the Big Bend country, nesting abundantly. Taken the whole length of the Grand Coulee.
- 18. Tyrannus verticalis. ARKANSAS KINGBIRD. This flycatcher was found everywhere that the last was observed except at the southern end of the Coulee. We found it from a short distance north of here, however, to the Columbia. It is common throughout Lincoln and Whitman Counties.
- 19. Sayornis saya. SAY'S PHŒBE.—Is not abundant but occurs everywhere in the Big Bend country.
- 20. Empidonax difficilis. Western Yellow-bellied Flycatcher. This species was not observed anywhere in the Grand Coulee, nor in the Big Bend country till we got south to Crab Creek in the southeastern part of Lincoln County. Along Crab Creek there is a dense growth of trees, affording a resort for birds such as does not occur northwest or west of it. Hence, we found that this was the northwest limit of many birds common to the southeast in Whitman County. This flycatcher is one of them.
- 21. Otocoris alpestris merrilli. Dusky Horned Lark.—Common throughout the Big Bend region.
- 22. Pica pica hudsonica. American Magpie.—These birds occur throughout the whole length of the Grand Coulee, but they are not very common. They were not observed on the plains to the east and southeast, but were again found at Rock Creek in Whitman County.
- 23. Corvus americanus. American Crow.—A few bands observed at the head of the Coulee along the Columbia River. Found common at Rock Creek below Rock Lake in the northwest part of Whitman County.
- 24. Xanthocephalus xanthocephalus. Yellow-headed Blackbird. Common in two marshes in the Grand Coulee, one near the middle, the other about eight miles from the head. Not seen elsewhere in the Big Bend, but found at Rock Creek in Whitman County.
- 25. Agelaius phæniceus. Red-winged Blackbird.—The writer cannot be certain that the Red-winged Blackbird of the inland Northwest is A. phæniceus, not having material at hand for comparison. Occurs in all marshy places.
- 26. Sturnella magna neglecta. Western Meadowlark. Common everywhere.
- 27. Icterus bullocki. Bullock's Oriole. Occurs in favorable places in the Grand Coulee throughout its length, but was not found common anywhere.
- 28. Scolecophagus cyanocephalus. Brewer's Blackbird.—Common everywhere except in sage-brush remote from water.
 - 29. Astragalinus tristis. AMERICAN GOLDFINCH.—Goldfinches were

not common in the Big Bend country. A few were seen at Freshwater Lake in the south half of the Coulee, and they were rather numerous along the Columbia at the head of the Coulee.

- 30. Poœcetes gramineus confinis. Western Vesper Sparrow. This is probably the most common bird of the Big Bend region. It inhabits alike the original undisturbed sage-brush covered tracts and the most extensive wheat fields. Everywhere it flits up before one, and it is a constant occupant of all barbed-wire fences.
- 31. Chondestes grammacus strigatus. Western Lark Sparrow.—Common everywhere in the Coulee and also throughout the Big Bend country.
- 32. Spizella breweri. Brewer's Sparrow. This very little sparrow associates everywhere with the much larger but similarly-colored Vesper Sparrow. It is, however, not nearly so abundant as the latter. The Columbia River is apparently almost the northern limit of its range in Washington, for Dawson reports but one specimen from Okanogan County.
- 33. Amphispiza belli nevadensis. SAGE SPARROW.—We found this species common on the sage-brush plain south of the Grand Coulee between the towns of Adrian and Ephrata on the Great Northern Railway, and also about Soap Lake (or Alkali Lake) in the southern end of the Coulee. North of here we did not meet with it, either in the Coulee or on the plains at either side, nor did we see it anywhere to the east or southeast. Dawson does not report it from Okanogan County. We probably collected the bird at the northern limit of its range. It has never been taken in Whitman County, and nothing is known of its range in the middle of the southern part of the State.
- 34. Melospiza melodia montana (?) Mountain Song Sparrow. This is a rare bird in the Big Bend. A few individuals were seen and heard near Freshwater Lake about two miles south of Coulee City. Only one specimen was obtained here. No others were met with in the whole country until we got to Crab Creek in the southeastern part of Lincoln County. The bird is abundant all over Whitman County.
- 35. Pipilo maculatus var.? One individual seen near the town of Ephrata on the Great Northern Railway, just southwest of the mouth of the Grand Coulee. No others met with.
- 36. Cyanospiza amœna. Lazuli Bunting.—A few individuals seen at Freshwater Lake in the southern part of the Coulee, and a few at the head along the Columbia. Only one specimen obtained.
- 37. Piranga ludoviciana. Louisiana Tanager. This species was found only on the bank of the Columbia at the head of the Grand Coulee.
- 38. Petrochelidon lunifrons. CLIFF SWALLOW. Common throughout the entire length of the Coulee, nesting along the cliffs. This is also the commonest swallow all over the Big Bend country.
- 39. Hirundo erythrogaster. BARN SWALLOW.—This swallow was not met with in the Coulee. A few were seen about the towns of Wilbur and Harrington in Lincoln County.

- 40. Tachycineta thalassina lepida. NORTHERN VIOLET-GREEN SWALLOW. This species was common at various places in the Grand Coulee, but was not so universally abundant as the Cliff Swallow.
- 41. Lanius Iudovicianus excubitorides. White-rumped Shrike.— Not common but found the whole length of the Coulee.
- 42. Dendroica æstiva. Yellow Warbler. Found wherever favorable clumps of small trees or bushes occur.
- 43. Geothlypis trichas occidentalis. Western Yellow-throat.—Common in reedy marshes of the Grand Coulee. Taken also at Rock Creek in the northwest part of Whitman County.
- 44. Icteria virens longicauda. Long-tailed Chat. We found this bird near the town of Ephrata southwest of the mouth of the Grand Coulee, at various places in the Coulee as far north as the Columbia, at Crab Creek in the southeastern part of Lincoln County, at Rock Creek in northwestern Whitman County. It occurs also about Pullman and along the Snake River in Whitman County.
- 45. Setophaga ruticilla. AMERICAN REDSTART. One male specimen taken in dense growth of trees along Crab Creek in southeastern part of Lincoln County. A female seen here also, but otherwise the species was not met with.
- 46. Oroscoptes montanus. Sage Thrasher. This bird is seldom seen and it confines itself to the undisturbed sage-brush areas. We saw two individuals near the town of Ephrata on the Great Northern Railway, another in the Grand Coulee somewhat north of the middle, a fourth at Crab Creek in Lincoln County, and a fifth one in the wide strip of 'scab-land' just south of Sprague in Lincoln County. Two specimens were obtained.
- 47. Galeoscoptes carolinensis. Catberd.—This bird is common in Whitman County, and we found it in the southeastern part of Lincoln County at Crab Creek. Nowhere beyond here, however, i. e., to the north, or west, did we meet with it.
- 48. Salpinctes obsoletus. Rock Wren.—This wren is common throughout the length of the Grand Coulee, but it almost confines itself to the slopes of talus along the bases of the walls. It occurs also in all of the 'scab-land' country where there is a great deal of bare rock forming low walls and projecting in rugged irregular masses. It is never to be found on a level open country. Even in the Coulee it seldom ventures far out onto the flat floor of the cañon, invariably associating itself only with rocky places.
- 49. Cistothorus palustris plesius. Western Marsh Wren.—Rather common in some of the marshes of the Grand Coulee. Although the writer has no material at hand for other localities for comparison, there is probably no doubt of the identification here given.
- 50. Parus atricapillus occidentalis. Oregon Chickadee. Found common along Crab Creek in Lincoln County, but not met with in the Coulee country.

- 51. Merula migratoria propinqua. Western Robin. Found throughout the Coulee but nowhere very plentiful.
- 52. Sialia arctica. MOUNTAIN BLUEBIRD.—Two specimens obtained in the Grand Coulee, both north of the middle. No others seen anywhere in the Big Bend country.

GENERAL NOTES.

The Dovekie (Alle alle) on Long Island, N. Y.—January 15, 1903, Mr. George W. Mott of Westminster Kennel Club brought in a Dovekie to be mounted. I inquired where he procured it, and he informed me that it had been given him by a boy who found it the morning previous, lying in the road midway between the steamboat dock and Babylon Village. It evidently had struck either the electric light or telephone wires, as the neck and breast were much bruised. The bird was found in a road crossing meadows near Great South Bay, and at least three and one half miles from the ocean. Both plumage and body were in good condition.—Henry Mott Burtis, Babylon, L. I.

A Hybrid Duck, $Anas\ boschas \times Nettion\ carolinensis.$ —Hybrids among the Anatidæ are well known to be of frequent occurrence and some of the crosses are so common as to be scarcely worthy of record. A specimen that has recently come into possession of the Academy of Natural Sciences of Philadelphia, however, seems to be quite an unusual mixture, and a hasty glance through the literature fails to discover a similar record, although there are several instances of hybrids between $Anas\ boschas\ and$ the old world species $Nettion\ crecca$.

The bird in question was secured by my friend, Dr. Charles B. Penrose of Philadelphia, on the upper part of Currituck Sound, N. C., on January 17, 1903. It is a drake and combines in almost equal proportions the characters of the Mallard and Green-winged Teal. The back is mainly Teal with the plainer feathers of the Mallard showing on the median line; the wings are also those of the Teal but the speculum is bluer and edged with black, while the fulvous bar is mixed with black and white. Below the belly is dusky like the Mallard's, with the same fine transverse vermiculations, and while the breast is spotted with black like the Teal's, the ground color is rich chestnut, with a tendency to lighter edges to the feathers as in the Mallard. The head is solid green like that of the Mallard with a narrow white neck band, and with a rufous frosting on the occiput covering part of the area so colored in the Teal. On the sides of the breast are the characteristic diagonal white stripes of the Teal. Size intermediate between the two.