Marmota caligata broweri, A New Marmot from Northern Alaska

BY

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AND

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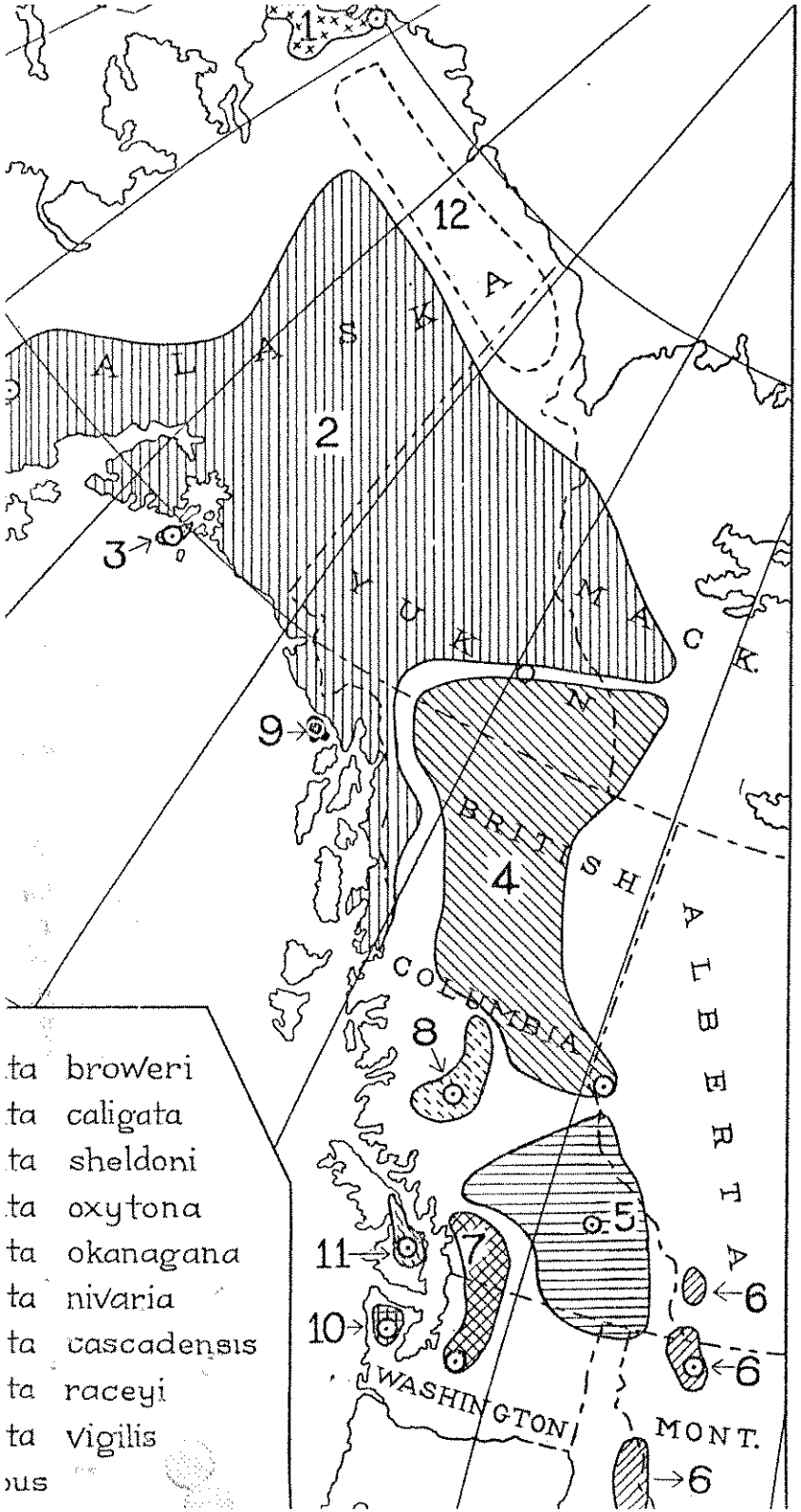

NOTES ON THE DISTRIBUTION OF THE HOARY MARMOTS[1]

By R. M. ANDERSON

THE DESIRABILITY of publishing a revised map of the distribution of the Hoary Marmots or "Whistlers" of the *Marmota caligata* group was suggested to the writer by Dr. E. Raymond Hall, Curator of Mammals, Museum of Vertebrate Zoology, University of California, Berkeley. The latest map showing the ranges of the different forms of this group is in Mr. A. H. Howell's "*Revision of the American Marmots*" in 1915[2], reproduced without change by Mr. H. E. Anthony in 1928[3].

Since that time the writer has described a new subspecies from the interior plateau region of British Columbia, *Marmota caligata raceyi* Anderson[4], and Hall and Gilmore have more recently described another new subspecies from northwestern Alaska (see *ante.*) A considerable number of additional specimens of several forms have also been obtained from various localities in the region and a number of additions and corrections can be made to the 1915 map.

The Hoary Marmots are essentially upland inhabitants, living near timber-line in the mountains, or in the vicinity of rock-slides and talus slopes where they may find shelter in connection with sufficient food. While the species (*Marmota caligata*) is quite generally distributed in the northwestern mountain regions, the ranges of the forms are by no means continuous as Marmots may be absent from the valleys or from mountain areas where conditions are not suitable. Considerable collecting and study will be necessary in the future before the numerous gaps in our map are filled and the points of contact or intergradation of the races are demonstrated.

The Northwestern Hoary Marmot, *Marmota caligata broweri* Hall and Gilmore, is based on 4 specimens from Point Lay and Cape Thompson on the northwestern coast of Alaska. When I was working in Arctic Alaska in 1908-1909 and 1913-1914, I heard many reports of Hoary Marmots from various points along the northern slope of the En Mountains, and saw at least one skin Hula-hula River in the foothills sou Barter Island, and other parts of skins i possession of Eskimos. They were kno the white traders as "badger" and t Eskimos as *Tjik-tjik-puk* or *Sik-sik* (meaning "big ground squirrel" = big *C parryii*), the native diagnosis of its rel ship being much nearer the truth than th the whites. Some of the Eskimos showe where they had taken specimens of the a on the Hula-hula River, but it was too in the autumn to get any specimens o hibernating Marmots. There is certai large area in the Endicott Mountains (indi by dotted range No. 12 on the accompa map) where Marmots certainly occur, until specimens are brought out from area it is impossible to say whether the I Marmots of the region belong to *M. c. br* or whether the range of typical Nor Hoary Marmot, *Marmota caligata ca* (Eschscholtz), extends northward from Yukon valley side to the foothills on north slope of the mountains. It is probable that the Marmots do not rang high on the mountains here as they do fa south, as the mountain-tops (from 3,0 8,000 feet) are rather barren and Arctic-ine conditions, as shown by the flora, e practically to sea-level on parts of the A coast.

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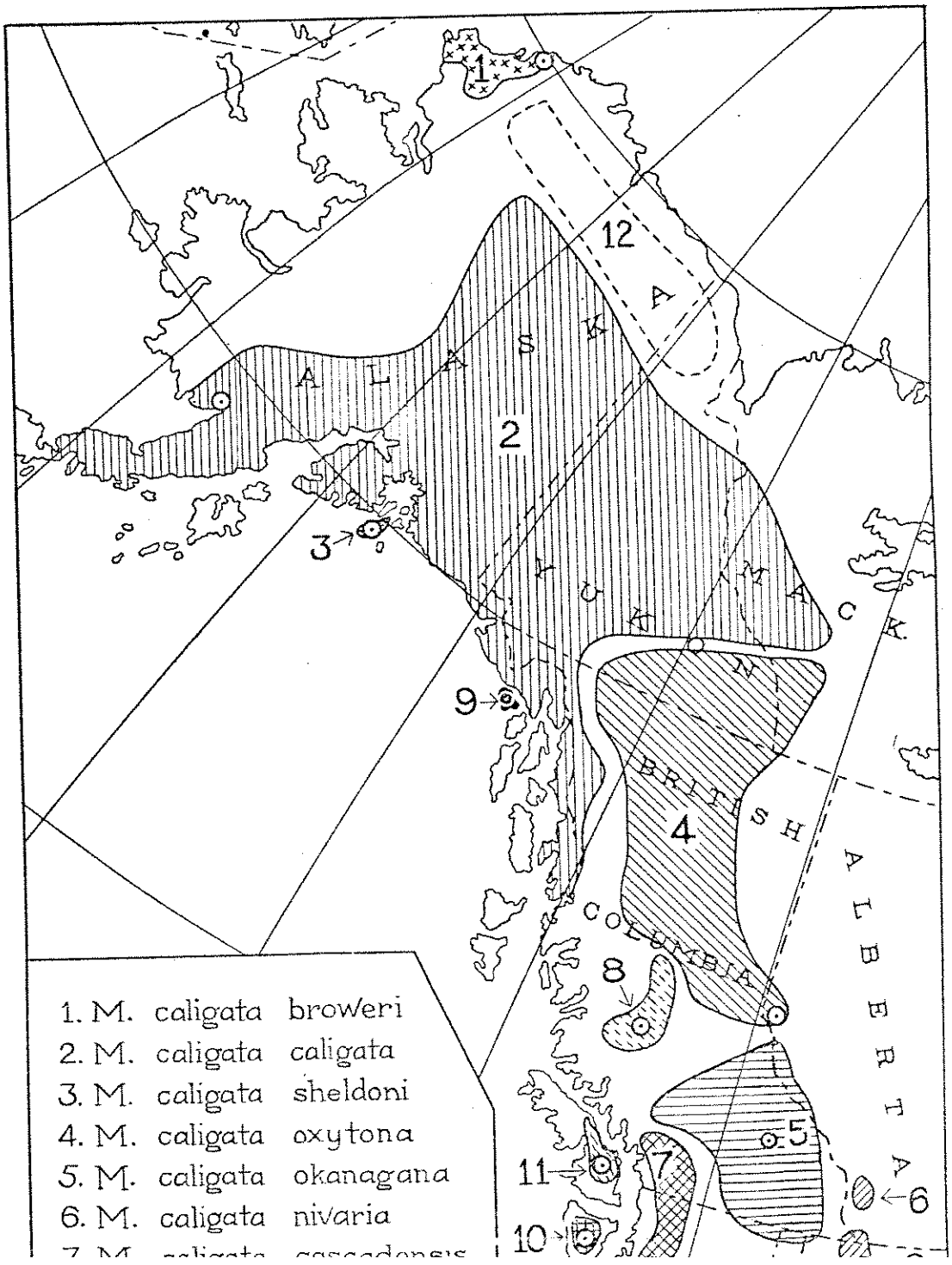
[2] North American Fauna, No. 37, Bureau of Biological Survey, U. S. Dept. of Agriculture, Washington, 1915. Fig. 3, p. 58.

[3] Field Book of North American Mammals, G. P. Putnam's Sons, New York—London, 1928. Fig. 47, p. 191.

[4] Annual Report, 1931, National Museum of Canada, 1932.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12
ALASKA
YUKON
BRITISH COLUMBIA
ALBERTA
1. M. caligata broweri
2. M. caligata caligata
3. M. caligata sheldoni
4. M. caligata oxytona
5. M. caligata okanagana
6. M. caligata nivaria

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[4] Annual Report, 1931, National Museum of Canada, 1932, pp. 112-119, Plate V.

o wander down to low levels, and it
ten in a small house where meat was
Two specimens (one melanistic) of
ritish Columbia Woodchuck, *Marmota*
petrensis" Howell, were taken near the
place. "*M. m. petrensis* is known to oc-
within the range of *M. c. okanagana* far-
ier to the south-east, and the Yellow-bellied
Marmot, *Marmota flaviventris avara*, occupies
a similar relationship to *okanagana* in the
drier valleys farther west.

In studying the range of the Cascade Hoary
Marmot, *Marmota caligata cascadensis* Howell,
I found seven records given by Howell (1915.
p. 69) of British Columbia localities, namely:
Chilliwack, 1; Hope, 1; Howe Sound (near
head), 3; Mount Baker range (near U.S.
Boundary), 8; Skagit River (mountains near
mihy) Mountain, 2; and that all these records
are from the west slope of the Cascade mount-
ains except Howe Sound (a little north of
Vancouver) and Spence's Bridge, a station on
the main line of the Canadian Pacific Railway
on the south bank of Thompson River about 30
miles north-east of the junction of Fraser and
Thompson rivers. As there are apparently no
other British Columbia records of *cascadensis*
on east side of Coast or Cascade mountains,
and as the Spence's Bridge record is some
distance from any other records of this sub
species, I thought it deserved further invest-
igation. The specimen (No. 20798, A. M. N
H.) collected by James Teit, in 1903, was re-
ceived on loan through the courtesy of the
American Museum of Natural History, and
proved to be a medium-sized subadult, in
aded and worn summer pelage, unsexed, and
ithout skull. It resembles all of our 14
ecimens of *M. c. okanagana* in having less
ckish on head than any of our 13 speci-
ns of *cascadensis*. Some of the specimens
g juveniles in poor coats, the comparisons
ot be very detailed. Even with fairly
skins of adults in good pelage it is
quite difficult to separate specimens of
nsis from *okanagana* with certainty,
e is considerable variation in the
and for a satisfactory determination
of the specimen is almost necessary.
a skin in the condition of the Spence's
ecimen, it does not seem justifiable
as certainly *cascadensis*. In my
general resemblance is somewhat
okanagana, and this opinion is
by the occurrence of *okanagana*
at McGillivray Creek, some 30 or 40 miles n
west of Spence's Bridge. The best solutio
the problem seems to be to treat the specin
as intermediate or indeterminable, and
down the northward extension of the range
cascadensis as shown in Howell's 1915 map
leaving the space to be filled when more spe-
cimens from the region in question are avail-
able for scientific study. The National
Museum of Canada obtained 2 specimens of
cascadensis from Lihumitson Park, near the
U.S. Boundary, in 1927, and specimens secured
by Mr. Kenneth Racey and Mr. Ian McTag-
gart-Cowan of Vancouver indicate that the
large indendation in the range of *cascadensis*
on western side of Howell's 1915 map may be
filled in.

The range of the Okanagan Hoary Marmot,
Marmota caligata okanagana (King), as map-
ped by Howell (1915, p. 58) on the basis of
the following specimens: (ALBERTA: Henry
House (mountains 15 miles south), 2; BRI-
TISH COLUMBIA: Field, 2; Glacier, 7; Spil-
limacheen River, 3; Toad Mountain (6 miles
south of Nelson, 4), is too narrow and does
not extend far enough to the westward. In
his description of *okanagana* (1915, pp. 64-66)
he discusses the original description by King [1]
and fixes the type locality as "Gold Range,
British Columbia,"—"the first range to the
eastward of Shuswap Lake—where it is likely
the type was secured" (Howell, 1915, p. 66).
King (*ibid.*, 241) defines the type region as
follows: "In a small tract of country, on the
borders of the Rocky Mountains, lying between
the Columbia and Fraser Rivers, these animals
are found in abundance, supplying with food
and clothing the Okanagan Indians, whose ter-
ritory is bounded to the north by the Seech-
wap Lake, and to the south by the Spokane
River . . ." Dr. H. S. Bostock and Dr. C. E.
Cairnes of the Geological Survey of Canada,
who are familiar with southern British Colum-
bia, state that while "Gold Range" is not
given on recent maps, in some of the older
works "Gold Range" was practically synonym-
ous with the present "Monashee Range" which
consists of a group of small ranges. At one
time the name "Gold Range" was applied to
the range now known as "Shuswap Range."
and this may properly be considered as the
type locality, as fixed by Howell, although his
map of the range of *okanagana* hardly comes
that far west.

[1] Narr. Journ. Shores Arctic Ocean, Vol. 2, 1836, p. 236.

[illegible] to *okanagana*, also 6 British Columbia specimens taken farther west than any of Howell's records—4 from Rossland Group of Monashee Range, near Rossland, B.C. (Green Mountain and Old Glory Mountain, 6,000 and 7,000 feet altitude) at edge of Columbia valley a few miles north of Stevens County, Washington; and 3 specimens from McGillivray Creek (5,500 to 6,000 feet altitude), near Lillooet, which extend the range of *okanagana* much farther west, including some country rather close to the northern end of the range of *cascadensis* as mapped by Howell in 1915.

The Montana Hoary Marmot, *Marmota caligata nivaria* Howell, is mapped by Howell as inhabiting two separate regions: IDAHO: Bitterroot Mountains (headquarters of Clearwater River), 3; Elk Summit, Salmon River Mountains, 2; MONTANA: Upper St. Mary's Lake (mountains near), Glacier National Park, 9. The National Museum of Canada has one additional specimen taken on Mount Forget-me-not, about 40 miles WSW of Calgary, in southwestern Alberta (No. 452, female, July 10, 1897, Wm. Spreadborough collector), which is clearly referable to *nivaria* and may be cited as the first Canadian record of this subspecies. As large white Marmots are also reported from near timber-line near the western border of Waterton Lakes National Park, Alberta, just north of the border of Glacier

In the collection of the National Museum of Canada are 6 specimens from Banff, Alberta (Cascade Basin, 7,000 feet altitude), which

[illegible] the British Columbia side of the mountain passes in that region.

The range of the Vancouver Island Marmot, *Marmota vancouverensis* Swath, which although of uniformly brown colour, is clearly related to the mainland species of the *Marmota caligata* group, was recorded by Howell (1915, p. 72) from Eagle Basin, 1; King Solomon Basin, 3; and Mount Douglas, 7. The known range of this species is now known to extend farther north on the eastern side of Vancouver Island on the strength of 5 specimens from Green Mountain, Nanaimo River, secured by Mr. Kenneth Racey in 1931, and one specimen taken by Mr. Arthur Peake on Battle Mountain in 1929 and presented to the National Museum of Canada by Major Allan Brooks.

The accompanying map is based on Howell's map "Distribution of the *Marmota caligata* group (1915, p. 58), with additions of the range of *M. c. broweri* by E. Raymond Hall; to the ranges of *M. c. raceyi* and *M. vancouverensis* by E. Raymond Hall and R. M. Anderson; and revision of the ranges of *M. s. cascadensis, M. c. okanagana, M. c. oxytona, and m. c. nivaria*, as well as of the range of undetermined form in Arctic Alaska by R. M. Anderson.

National Museum of Canada, Ottawa.

MAP.—Distribution of the *Marmota caligata* group, as revised by R. M. Anderson and E. Raymond Hall, 1934. Type localities shown by circle and dot. (See page 60).