The Tawny Marmots are seldom more than two, and most commonly only one individual seen at a time at the mouth of a hole; and, although I have captured many of them at that season, by pouring water into their burrows and compelling them to come out, I have never obtained more than one from the same hole, unless when a stranger has been chased into a burrow already occupied by another. There are many little well-worn pathways diverging from each burrow, and some of these roads are observed, in the spring, to lead directly to the neighbouring holes, being most probably formed by the males going in quest of a mate.

They place no sentinels, and there appears to be no concert between the Tawny Marmots residing in the neighbourhood, every individual looking out for himself. They never quit their holes in the winter; and I believe they pass the greater part of that season in a torpid state. The ground not being thawed when I was at Carlton House, I had not an opportunity of ascertaining how their sleeping apartments were constructed, nor whether they lay up stores of food or not. About the end of the first week of April, or as soon as a considerable portion of the ground is bare of snow, they come forth, and when caught on their little excursions, their cheek-pouches generally contain the tender buds of the *Anemone Nutans*, which is very abundant, and the earliest plant on the plains. They are fat when they first appear, and their fur is in good condition; but the males immediately go in quest of the females, and in the course of a fortnight they become lean and the hair begins to fall off. They run pretty quick, but clumsily, and their tails at the same time move up and down with a jerking motion. They dive into their burrows on the approach of danger, but soon emerge out again if they hear no noise, and may be easily shot with bow and arrow, or even knocked down with a stick, by any one who will take the trouble to lie quietly on the grass near their burrow for a few minutes. Their curiosity is so great, that they are sure to come out to look around.

As far as I could ascertain, they feed entirely on vegetable matter, eating in the spring the young buds and tender sprouts of herbaceous plants, and in the autumn the seeds of grasses and leguminous plants. Their cry when in danger, or when angry, so nearly resembles that of *Artemis Paria*, that I am unable to express the difference in letters. Several species of falcon that frequent the plains of the Saskatchewan prey much on these Marmots; but their principal enemy is the American badger, which, by enlarging their burrows, pursues them to their inmost retreats. Considerable parties of Indians have also been known to subsist for a time on them when large game is scarce, and their flesh is palatable when they are fat.
RICHARDSON'S SPERMOPHILE.

GEOGRAPHICAL DISTRIBUTION.

This species has not been observed further north than latitude 55°. In the appendix to Franklin's Journey, it was said to inhabit the shores of the Arctic Sea, but it appears that another species had been mistaken for it. It is found in the grassy plains that lie between the north and south branches of the Saskatchewan River. It is very common in the neighbourhood of Carlton House, its burrows being scattered at short distances over the whole plain. Townsend obtained his specimens in the Rocky Mountains, (about latitude 45°,) and we have traced it as far south as latitude 38°.

GENERAL REMARKS.

"The Tawny Marmot Squirrel is most readily distinguished from the true squirrels by the smallness of its ears, the shape of its incisors, which are larger but not so strong and much less compressed; the second and not the third toe being the largest, and its comparatively long claws and less bushy tail. It seems to be the American representative of A. concolor or the Jevraska of Siberia." — (Richardson.) The males of this species are represented as very pugnacious in their habits, and we have represented one in our plate that has lost the end of its tail, the figure being taken from one of the specimens sent to us.
SPERMOPHILUS RICHARDSONII.—Sab.

Richardson’s Spermophile.

PLATE L.

Sciuro Hudsonio aliquantulum major; dorso fulvescente, pilis nigris mixtis; ventre fusco-rufescens; cauda mediocri, ad extremum nigra apice fulva; auriculis brevissimis.

CHARACTERS.

A little larger than the Hudson’s Bay squirrel; back, yellowish-gray, interspersed with black hair; belly, pale grayish-orange; tail, rather short, black at the extremity, tipped with fawn colour; ears, very short.

SYNONYMES.


“ Idem, Franklin’s Jour., p. 662.


Arctomys (Spermophilus) Richardsonii, Rich., F. B. A., p. 164, pl. 11.

DESCRIPTION.

Body, rather short and thick; forehead, arched; nose, blunt, covered with short hairs; margins of the nostrils, and septum, naked; whiskers, few, and shorter than the head; eyes, large; ears, small, rounded, clothed with short hairs on both surfaces; cheek-pouches, of moderate size. The fur on the whole body is short and fine.

Legs, rather short; nails, long, weak, compressed, and slightly arched. On the fore-feet there are four toes and a minute thumb; the toes are covered on the upper surface with short hairs which reach the root of the nails. Palms, naked, containing five callosities. The thumb has a very short joint and is covered by a convex nail. Middle toe longest; the first and third are of equal length, and the outer one is shortest and farthest back.

On the hind-feet there are five toes. The three middle ones are nearly of equal length, the other two are smaller, and are situated farther back:
the claws are shorter than those of the fore-feet; the soles are naked, but the heel is covered with hairs along the edges which curve over it. The tail is not very bushy and is about the size of that of the chipping-squirrel, *Tamias Lysteri*.

**COLOUR.**

Teeth, light orange; whiskers, black; nails, dark-brown; the back is yellowish-brown, intermixed with a few blackish hairs; on the sides, this colour is a shade lighter; on the nose, there is a slight tinge of chesnut-brown. The cheeks, throat, and inside of the thighs, are dull white; belly, brownish-gray. The tail is of the colour of the back; the hairs on the margins, near the end, are dark-brown tipped with yellowish-white.

**DIMENSIONS.**

Adult female.

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>From point of nose to root of tail</td>
<td>9 1/2 inches</td>
</tr>
<tr>
<td>Head</td>
<td>2 do.</td>
</tr>
<tr>
<td>Tail (vertebrae)</td>
<td>2 1/2 do.</td>
</tr>
<tr>
<td>Tail, to end of hair</td>
<td>3 1/2 do.</td>
</tr>
<tr>
<td>From heel to end of middle claw</td>
<td>1 1/2 do.</td>
</tr>
<tr>
<td>Height of ear</td>
<td>0 1/4 do.</td>
</tr>
</tbody>
</table>

**HABITS.**

We possess no personal knowledge of this species, never having met with it in a living state. The specimens from which our figures and descriptions were made, were obtained by Mr. Townsend, and we are indebted to the excellent work of Richardson for the following account of its habits: “This animal inhabits sandy prairies, and is not found in thickly wooded parts. It is one of the animals known to the residents of the fur countries by the name of Ground-squirrel, and to Canadian voyagers by that of Siffler. It has considerable resemblance to the squirrels, but is less active, and has less sprightliness and elegance in its attitudes.

“It can scarcely be said to live in villages, though there are sometimes three and four of its burrows on a sandy hummock or other favourable spot. The burrows generally fork or branch off near the surface, and descend obliquely downwards to a considerable depth; some few of them have more than one entrance. The earth scraped out, in forming them, is thrown up in a small mound at the mouth of the hole, and on it the animal seats itself on its hind-legs, to overlook the short grass,
and reconnoitre before it ventures to make an excursion. In the spring, there are seldom more than two, and most frequently only one individual seen at a time at the mouth of a hole; and, although I have captured many of them at that season, by pouring water into their burrows, and compelling them to come out, I have never obtained more than one from the same hole, unless when a stranger has been chased into a burrow already occupied by another. There are many little well-worn pathways diverging from each burrow, and some of these roads are observed, in the spring, to lead directly to the neighbouring holes, being most probably formed by the males going in quest of a mate. They place no sentinels, and there appears to be no concert between the Tawny Marmots residing in the neighbourhood, every individual looking out for himself. They never quit their holes in the winter; and I believe they pass the greater part of that season in a torpid state. The ground not being thawed when I was at Carlton House, I had not an opportunity of ascertaining how their sleeping apartments were constructed, nor whether they lay up stores of food or not. About the end of the first week of April, or as soon as a considerable portion of the ground is bare of snow, they come forth, and when caught on their little excursions, their cheek-pouches generally contain the tender buds of the Anemone Nutalliana, which is very abundant, and the earliest plant on the plains. They are fat when they first appear, and their fur is in good condition; but the males immediately go in quest of the females, and in the course of a fortnight they become lean and the hair begins to fall off. They run pretty quick, but clumsily, and their tails at the same time move up and down with a jerking motion. They dive into their burrows on the approach of danger, but soon venture out again if they hear no noise, and may be easily shot with bow and arrow, or even knocked down with a stick, by any one who will take the trouble to lie quietly on the grass near their burrow for a few minutes. Their curiosity is so great that they are sure to come out to look around.

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