Small bristles at the base of the upper mandible. Plumage full, soft, and blended. Wings of ordinary length, much rounded, the fourth quill longest; tail long, rounded. Roof of upper mandible rather flat, with a narrow median and two broad lateral flattened ridges; tongue compressed, convex above, with a median groove, horny at the end, and pointed; œsophagus slightly dilated about the middle; stomach a strong muscular gizzard; intestine short; cœca small.

ARCTIC GROUND-FINCH.

†PIPILO ARCTICUS, *Swains.*

PLATE CXCIV.—MALE AND FEMALE.

This handsome species was first described by Mr. SWAINSON in the *Fauna Boreali-Americana*. Dr. RICHARDSON in the same work states, that it was observed only on the plains of the Saskatchewan, where he supposes it breeds, as one specimen was obtained late in July. It arrives there in the end of May, and frequents shady and moist clumps of wood, being generally seen on the ground. It feeds on grubs, and is solitary and retired. My friend Mr. NUTTALL has furnished me with the following account of it:—

“We found this familiar bird entirely confined to the western side of the Rocky Mountains. Like the common Towee, it is seen to frequent the forests amidst bushes and thickets, where, flitting along or scratching up the dead leaves, it seems intent on gaining a humble subsistence. It is much more shy than the common kind, when observed flying off or skulking in the thickest places, where it is with difficulty followed. In a few minutes, however, the male, always accompanying his mate, creeps out, and at first calls in a low whisper of recognition, when, if not immediately answered, he renews his plaintive *par par* or *pay payay*, until joined by her; when, if the nest be invaded, he comes out more boldly, and reiterates his complaint, while there remains around him the least cause of alarm. When undisturbed during the period of incubation, he frequently mounts a low bush in the morning, and utters at short intervals, for an hour at a time, his monotonous and quaint warble, which is very similar to the notes of the Towee; but this latter note (*towee*) so continually repeated by our humble and familiar

Arctic Ground Finch.

1. Male. 2. Female.

Drawn from Nature by J. T. Audubon. P.R.S.P.L.S.

Engraved & Col'd by J. T. Bowen. Philad.

On voit, en effet, que la production d'un bien ne peut être considérée comme un acte isolé, mais qu'elle est le résultat d'un processus complexe, qui implique l'intervention de nombreux facteurs, tels que le travail, le capital, les machines, etc. C'est pourquoi, pour comprendre la production, il faut étudier ces différents facteurs et leur rôle dans le processus. C'est ce que fait l'économie, en analysant les relations entre les différents éléments de la production. Elle cherche à expliquer comment ces relations évoluent et comment elles influencent la production globale. C'est une science qui a pour objet l'étude des lois qui régissent la production et la distribution des richesses.

Il est important de noter que l'économie n'est pas une science exacte, comme la physique ou la chimie. Elle est une science sociale, qui étudie le comportement humain dans le cadre de la production et de la distribution. Elle est donc soumise à des incertitudes et à des variations, car elle dépend de facteurs humains, qui sont eux-mêmes soumis à des influences sociales, culturelles, etc. Cependant, malgré ces limites, l'économie a permis de faire de nombreuses découvertes importantes, qui ont permis de mieux comprendre le fonctionnement de la société humaine. Elle a permis de montrer que la production n'est pas un acte isolé, mais qu'elle est le résultat d'un processus complexe, qui implique l'intervention de nombreux facteurs. Elle a permis de montrer que la production est soumise à des lois, qui peuvent être étudiées et comprises. C'est pourquoi, l'économie est une science essentielle pour comprendre la société humaine et pour améliorer notre vie.

Ground Robin, is never heard in the western wilds, our present species uttering in its stead the common complaint, and almost mew, of the Cat-bird. On the 14th of June, I saw the nest of this species, situated in the shelter of a low undershrub, in a depression scratched out for its reception. It was made of a rather copious lining of clean wiry grass, with some dead leaves beneath, as a foundation. The eggs were four, nearly hatched, very closely resembling those of the Towee, thickly spotted over, but more so at the larger end, with very small, round, and numerous reddish chocolate spots. As usual, the pair shewed a great solicitude about their nest, the male in particular approaching boldly to scold and lament at the dangerous intrusion. This species extends into Upper California, and is occasionally seen there with the brown species of Swainson, *Pipilo fuscus*."

Mr. TOWNSEND informs me, that it is called "Chlawath'l" by the Chinook Indians, and is abundant on the banks of the Columbia, where it is found mostly on the ground, or on bushes near the ground, rarely ascending trees. His description of the nest and eggs agrees precisely with that of Mr. NUTTALL.

The eggs of this bird in my possession measure an inch and an eighth in length, and seven-eighths in breadth. They are broadly rounded at the larger end, and fall off rather abruptly at the other extremity. The spots and markings are vermilion, intermixed with larger spots of neutral tint, on a pure white ground.

Male, $8\frac{1}{2}$; wing, $3\frac{1}{2}$. Female, 8; wing, $3\frac{1}{4}$.

Columbia river, and northward to the Fur Countries. Abundant. Migratory.

PYRGITA (PIPILO) ARCTICA, *Arctic Ground-Finch*, Swains. and Rich. F. Bor. Amer., vol. ii. p. 260.

ARCTIC GROUND-FINCH, Nutt. Man., vol. ii. p. 589.

ARCTIC GROUND-FINCH, *Fringilla arctica*, Aud. Orn. Biog., vol. v. p. 49.

Adult Male.

Bill short, robust, narrower than the head, conical, somewhat compressed toward the end, acute; upper mandible almost straight in its dorsal outline, being very slightly convex, the ridge narrow and well-marked, the sides convex, the edges somewhat inflected, the tip a little declinate; lower mandible with the angle short and broad, the dorsal line slightly convex, the sides rounded, the edges involute, the point acute. The nostrils basal, roundish, open, partially concealed by the feathers. The gap-line nearly straight, a little deflected at the base.

Head rather large, ovate; neck shortish; body robust. Legs of moderate length, rather stout; tarsus of moderate length, compressed, covered ante-

riorly with seven scutella; toes rather large, scutellate above, the first stronger, the lateral nearly equal, the third and fourth connected at the base. Claws rather long, moderately arched, slender, compressed, laterally grooved, acute.

Plumage full, soft, and blended. Wings of ordinary length, the fourth quill the longest, the third and fifth next and nearly equal, the second shorter than the sixth, the first seven and a half twelfths of an inch shorter than the fourth. Tail long, rounded, of twelve strong feathers.

Bill brownish-black. Iris red. Feet and claws reddish-brown. The general colour of the plumage is black, that colour extending over part of the breast, the sides and lower tail-coverts orange-red, the central part of the breast and abdomen white, the feathers of the tibiae dusky, margined with whitish. An elongated patch on the outer web of all the scapulars; a small terminal spot of the same on the first row of small coverts and on the secondary coverts, and a large patch at the end of the inner web of the outer three tail-feathers on each side, white.

Length to end of tail $8\frac{1}{2}$ inches, bill along the ridge $\frac{7}{12}$, along the edge of lower mandible $\frac{8\frac{1}{2}}{12}$; wing from flexure $3\frac{1}{2}$; tail $4\frac{2}{12}$; tarsus $1\frac{1}{12}$; hind toe $\frac{5}{12}$, its claw $\frac{4\frac{1}{2}}{12}$; middle toe $\frac{9\frac{1}{2}}{12}$, its claw $\frac{3}{12}$.

Adult Female.

The female is smaller. The parts which are black in the male, are blackish-grey, which on the fore part and sides of the neck is tinged with reddish-brown. In other respects there is not much difference in the plumage.

Length to end of tail 8 inches; bill along the ridge $\frac{7}{12}$; wing from flexure $3\frac{1}{4}$; tail 4; tarsus 1; hind toe $\frac{4\frac{1}{2}}{12}$, its claw $\frac{5\frac{1}{2}}{12}$; middle toe $\frac{8\frac{1}{2}}{12}$, its claw $\frac{4\frac{1}{2}}{12}$.

The male above described was shot by Mr. TOWNSEND on the Columbia river, on the 14th of May, 1835; the female on the 11th of October, 1834.

In form, size, and colour, this bird is most closely allied to the Towhe Finch, *Fringilla erythrophthalma* of Linnæus, from which, however, it is at once distinguishable by the spots of white on the scapulars and wing-coverts which are wanting in that species. The latter on the other hand has a patch of white on the basal part of the outer webs of the primaries, that part being black in the present species.

Arctic Ground Finch.

1. Male. 2. Female.

Drawn from Nature by J. T. Audubon. P. R. S. P. L. S.

Engraved & Col'd by J. T. Bowen. Philad.

Audubon, John James. 1841. "Arctic Ground-Finch, *Pipilo arcticus*, Swains. [Pl. 194]." *The birds of America : from drawings made in the United States and their territories* 3, 164–166. <https://doi.org/10.5962/p.319307>.

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