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It is evidently congeneric with *P. crassipes*, the type of *Pachygrapsus*. We have specimens from Constantinople in the Smithsonian Museum.

**Cystograpsus angulatus.**

*Cystograpsus angulatus* Dana, U. S. Exploring Expedition, Crust. i. 352, pl. xii. f. 6.

In our specimens the ambulatory feet are ciliated toward their extremities. "Rio de la Plata," Capt. Page's Expedition.

**Metasesarma trapezium.**

*Metasesarma trapezium* Dana, loc. cit., i. 354, pl. xxii f. 8.

An examination of Prof. Dana's original specimens shows that this species belongs to M. Edwards' genus *Metasesarma*.

**Geothelphusa berardi.**


We have specimens from Egypt, brought home by Mr. Marsh.

**Potamocarcinus denticulatus,** n. sp.

The following description will serve to distinguish it from *P. armatus*, the only species hitherto known.

Carapax flattened, obsolely granulated. Antero-lateral margin denticulated; little teeth about eighteen in number on each side. Meros or fourth joint of the external maxillipeds broad, almost quadrate. Length of carapax in a male, 0:84; breadth 1:22 inch.

In the river Atrato, New Grenada. Atrato Exploring Expedition.

**Dilocarcinus pictus.**

*Dilocarcinus pictus* M. Edw., Arch. du Mus. vili. 181, pl. iv. f. 2.

Paraguay, Capt. Page's Expedition.

Dr. Randall's genus *Orthostomus* was founded on a species of M. Edwards' subsequently constituted *Dilocarcinus*. This name has, however, been used twice previously in Articulata.

**Dilocarcinus pagei,** n. sp.

A species closely allied to *Dilocarcinus spinifer* M. Edw. It differs, however, in the following particulars: The surface of the carapax is more even, the limits of the regions being scarcely traceable. The seven teeth of the antero-lateral margin are arranged as in *Dilocarcinus castelnau* M. Edw., the second tooth not being distant from the angle of the orbit. The inferior margin of the orbit is armed with six very sharp, slender spines. The inferior margin of the meros-joint in the chelipeds is four-spined; while the joint preceding it is one-spined. From *D. castelnau*, which it resembles in the shape of the carapax, etc., it differs in having five sharp spines at the antero-lateral angle of the buccal area.

Paraguay, Capt. Page.

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**A Monograph of the Genus **Ægiotus**, with descriptions of new species.**

**BY ELLIOTT COUES.**

Since the publication, in 1858, of the Ninth Volume of the Reports on the Pacific Rail Road Surveys—the General Report on the Birds—the amount of material has steadily and rapidly increased, until there is, at the present day, more than double the number of specimens in the museum of the Smithsonian. 1861.]
This great accession of new material in all departments of Ornithology, has of course, proportionally increased our knowledge of the birds of North America, both as regards the number of species inhabiting the continent, and their geographical distribution; and has furnished the means of making many additions, and some corrections, to the General Report. But, perhaps, to no single group of birds have there been so many added, as to that one to which it is proposed to devote a few pages.

At the time of the writing of the article on _Aegithus_ in the General Report, there were but eight specimens of the genus in the collection, and those representing but a single species. The series of _Aegithi_, from an examination of which the present paper was prepared, consists of more than one hundred specimens, from very various localities in America, Europe and Greenland, and comprises all the known species, except _A. rufescens_ and _Holló_lli, and is, moreover, particularly rich in the species described here for the first time. The very large series of _Aegithus exilipes_ were mostly procured by Messrs. Robert Kennicott and Bernard R. Ross, though some were received from Donald Gunn, Esq. The series of _A. fuscus_ were mostly obtained by ourselves in Labrador. The specimens upon which the _A. rostratus_ is founded were kindly furnished for examination by the Copenhagen Museum, which also supplied the examples of _A. canescens_, and of the European type of _A. liniarius_.

The above remarks seem necessary to prevent the doubt that might otherwise very naturally arise, that at this late date there could remain undescribed three species of so well known a genus as the present. We may be allowed to add, that we have formed our opinions only after long study and deliberation, as well as consultation with several very eminent ornithologists.

Though the four described species of _Aegithus_ are well known, the synonymy of some of them is in a state of considerable confusion. For this reason, and for the sake of showing more clearly the relationships of the new species, it has been deemed advisable to present a complete monograph of the genus.

_AEGIOTHUS_ Cabanis.

*Fringilla* sp. Linnaeus, 1766, et auct. antiqu.
*Passer* sp. Pallas, 1811, nec auct.
*Spinus* p. Koch, nec Boie, 1826.
*Linaria* Cuvier, 1817, nec Bechst., 1802, cujus typus *Fring. cannabina* Linn.; nec *Linaria* Tourn. quae plant. gen.
*Acanthis* Bonaparte, 1850; nec Bechst. 1802, cujus typus *Fring. carduelis* Linn.; nec Meyer, 1822, (typus idem); nec Keys. et Blas. 1840, cujus typus *Fring. spinus* Linn.


_Linacaenthis_, Des Murs. 1853, fide G. R. Gray.

_Char. gen._—Rostrum parvum, breve, rectum, plus minus compressum et acutum, basi plumbis rigidis, recumbentibus, naris rotundas occultantibus tectum. Ala longissima, remigibus primis tribus fere inter se equalibus. Cauda elongata, valde forficata, rectricibus latis, rotundatis. Pedes breves, debiles, digitum medio sine ungue tarsio multo breviore, digitis lateralisibus fere inter se equalibus, hallucus ungue breviore. Ungues elongati, compressi, incurvati, acutissimi.

Mas et fem. omni temp. pileo rubro induti; mas nupt. temp. pectore uropygioque roseo vel carmesino tinctis.

The genus which occupies our attention at present is one of the most distinct and easily recognizable of the _Fringillidae_. Its essential characters lie in the small, more or less compressed and acute bill, covered at the base with recurved plumuli, so long and dense as to completely hide the nostrils; in the long wings; in the rather long deeply forked tail; and in the weak feet with their very short toes. The pattern of coloration also seems, in this instance, to be a generic character, being precisely the same in all the known species of

[Nov.]
the genus, and not existing in any other, though there is seen an approach to it in *Cannabina*.

In the type of the genus the bill is exceedingly acute and much compressed, the lateral outlines even concave. From this character of bill, there is seen through *A. Holbotti* and *fuscescens*, a gradual transition to the *A. rostratus*, where the bill is much larger, less compressed and acute, and more full and turgid. The plumage are also considerably shorter and more scant; and the whole appearance of the bill much that of a *Cannabina* or even of a *Carpodacus*. The wings are very constant throughout the genus, differing scarcely appreciably in length or pointedness in the different species, though the proportions of the primaries vary considerably in the same species. Exactly the reverse, however, is the case with regard to the feet; i.e., the characters differ considerably in the different species, but always are quite constant in each. Thus in *linarius*, *rufescens*, *Holbotti*, *fuscescens* and *rostratus* the proportions of tarsus and toes are much the same, the difference in absolute length being only proportional to the size of the birds. In *exilipes* the feet are smaller and weaker, and the toes shorter, the difference being specially noticeable in the middle toe, which, with the claw, is shorter than the tarsus. In *canescens*, on the other hand, the feet are larger and stronger, even more so than is proportional to the greater size of the bird; but the toes are excessively short, so much so that even the unusually long claw does not make the middle toe equal to the tarsus. The tail differs but slightly, if at all, in the different species; for though *A. canescens* is spoken of by authors as having a comparatively longer tail than has *linarius*, the difference seems hardly more than is proportional to the greater size of the bird.

With respect to color, the species present a remarkable similarity, not only in the pattern of coloration, but also in the tints. In all, there is found the crimson pileum, which varies in size, and in the intensity of the color, with sex and age. It has sometimes a peculiar coppery or brazen reflection, very different from the usual deep crimson tint. The breast, with the sides of the head and body to some distance, as well as the rump, are tinged with rosy or carmine. In the examination of a great number of specimens I have noticed a fact that I have seen nowhere stated. It is that the depth and intensity of the color on the breast and rump is in direct proportion to the lightness or darkness of the general colors of the bird. Thus, in *rostratus* and *fuscescens*, the rosy on the breast becomes so bright as nearly to equal in intensity the crimson of the crown. *Canescens* and *exilipes* present the other extreme, the rosy of the breast being very light, scarcely more intense than that on the rump. *Linarius*, and *rufescens* and *Holbotti* are intermediate between the two extremes in this respect. The females of every age, and the very young males, either want entirely this rosy on the breast and rump, or else show but very slight traces of it. All the species are streaked above; the feathers having very dark centres and light borders; but in *fuscescens* and *rostratus* these borders are so narrow that the parts appear almost uniformly dusky. In *canescens* and *exilipes* these streaks disappear on the rump, leaving that part pure white; in the other species of the genus the rump is thickly streaked. In all, the sides of the body are more or less streaked with dusky; and here the same rule holds good as with regard to the rosy of the breast. In the darkest colored species—*A. fuscescens* and *rostratus*—the streaks are most numerous, darkest, and most distinctly defined; they become less numerous and distinct in *linarius* and *exilipes*, and are sometimes almost wanting in *canescens*. In the females these streaks extend quite across the breast.

It will thus be seen that the species of the genus are all very closely related; the characters, when taken from the colors, being chiefly those of intensity, and when based upon form, being found in the varying combination of several features. *A. rostratus*, indeed, differs from the others in the possession of a much larger and more turgid bill; but as the other characters agree strictly with the type, and especially as the transition from one extreme to the other, 1861.]
through *fuscescens* and *Holbællii*, is gradual, we see not the slightest cause for separating it, even sub-generically. Moreover, if distinctions were founded upon size of bill, there is no reason why a similar discrepancy in the size and proportions of the feet should not be made the grounds of division, and thus it would be necessary to separate the *A. conenesces* and *exilipes* — a procedure hardly warrantable. We think it probable that the genus, as far as can be judged from the species now known to compose it, is incapable of a natural division.

Throughout this genus the most tangible evidence of immaturity, next to the absence of the rosy tints on the breast and rump, lies in the presence of a general yellowish or rufous suffusion, particularly about the head and foreparts of the body. This is accompanied by a general indistinctness of outline of the streaks, the dusky being bordered with reddish, which fades insensibly into the white ground color. Indeed, we are of opinion that this rule is capable of much more extensive application, embracing perhaps the greater part of the genera of the *Fringillidae* the species of which are streaked. It is very evident in young specimens of *Passerellus savannah*, *Poeetes gramineus*, *Melospiza melodia*, and other allied species, and in some species of *Plectrophanes*, the females of which resemble the streaked sparrows very closely. Moreover, in some species, as for example, the *Spizella socialis* and *Coturniculus passerinus*, the presence of streaks below is an evidence of immaturity, these streaks entirely disappearing when the bird is fully adult.

The "theory of variation," then, in this genus, so far as regards the plumage, would seem to be essentially the same as that which is most usual throughout the family, though agreeing most closely with that exhibited by the *Spizella* (of Baird, as defined by that author). The sexual variations, however, in the absence in the female, of the red which is the most conspicuous color of the male, is precisely the same as is seen in allied coccothraustine types, such as *Pinicola*, *Carpodacus*, *Curvirostra*, etc.

Geographical Distribution.—The genus is entirely confined to the Northern hemisphere, being unknown in Africa or South America. It is, moreover, emphatically a boreal genus, all the species inhabiting high latitudes, and only coming south during the winter. The species, as far as now known, are very equally distributed. One is common to Europe and America; two are peculiar to America; two to Europe; and two inhabit the neutral ground of Greenland. Both the latter, however, are probably found at times in Europe, and may also very possibly be detected on our own continent.

Comparison with allied Genera.—The genus is most closely allied to *Cannabina*, a European form, with *Fringilla cannabina* Linn., as type, both having much the same general form and appearance. The differences, however, are readily appreciable, and quite sufficient to separate the two. In *Linota* the bill is much larger, stouter and more turgid, and less compressed and acute, and the nasal plumuli are very much shorter. The feet are larger and stronger, the toes especially much longer, the middle one, without the claw, being nearly as long as the tarsus. The hind toe is as long as its claw. The tail is shorter, less forked, its feathers much narrower and more acute. The wings are much the same. The general pattern of coloration is the same; but the colors of the back are in well defined areas; the throat is streaked; the tail and wings with very broad well defined white edges, etc. Apparently the most essential distinctive characters are those lying in the feet. *Leucosticta* is the most closely allied North American genus, agreeing with *Egithotus* in many respects. It differs, however, in a stouter, more turgid, less compressed and acute bill, with its decidedly convex culmen; in the presence of ridges on the lower mandible. The tail is much less forked, and the feathers are even broader, with more obtuse tips. The feet are much the same; but the lateral toes, in comparison with the middle, are shorter. The claws are shorter. *Chrysomitra*, with *Fringilla spinus* L., as type, has even a more compressed, attenuated and acute bill, but the culmen is much curved; the nasal plumuli are exceedingly short; the
tail is very much shorter, with narrower and more acute feathers; and the toes, especially the hinder one, are longer. The differences from the other more or less closely allied genera,—Carpodacus, Cururostra, Carduelis, etc.,—are too great to require special comparison.

The following brief schedule will serve to determine the species:—

**Synopsis of Species.**

A. Middle toe and claw equal to the tarsus. Rump streaked with dusky at all ages and seasons.

I. Bill dusky; dusky predominating above; sides very distinctly streaked; wings and tail very narrowly edged with whitish; breast in adult deep carmine.

1. Bill enormously large, arched, the culmen convex. Length 6:00; wing, 3:25; tail, 2:70; bill, 0:41; tarsus, 0:68; middle toe alone, 0:41. ...................... _rostratus._

2. Similar; smaller; bill less arched; culmen straight. Length, 5:25; wing, 2:90; tail, 2:35; bill, 0:35; tarsus, 0:58; middle toe, 0:36. ............................................. _fuscescens._

II. Bill mostly yellow. Yellowish predominating above; sides confluentely streaked; wings and tail broadly margined with whitish; breast in adult bright rosy.

3. Bill bright yellow, elongated, robust; plumuli short; lores and a large gular spot black. Length, 3½ inches (Bp.) _Holl._

4. Smaller; bill exceedingly acute, yellow, culmen and gonys black. Rump white, streaked with dusky. Tail, 2:65 inches. ...................... _linarius._

5. Similar, but smaller; tail scarcely 2 inches; rump tinged with reddish. ............................................. _rufescens._

B. Middle toe and claw shorter than the tarsus. Rump never streaked in adult males.


6. Size of _linarius._ Feet short and weak. Tarsus 0:55; middle toe 0:28. ...................... _exilipes._

7. Much larger. Feet long and strong. Tarsus 0:65; middle toe 0:30. ...................... _canescens._

The following table will exhibit the comparative measurements of the species; and, to some extent, the amount of variation to which they are subject:—

**Comparative Measurements of Species.**

<table>
<thead>
<tr>
<th>Name</th>
<th>Sex</th>
<th>Length</th>
<th>Extent</th>
<th>Wing.</th>
<th>Tail.</th>
<th>Bill.</th>
<th>Tarsus.</th>
<th>Middle Toe.</th>
<th>Its claw.</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>A. rostratus</em></td>
<td>♂♀</td>
<td>6:00*</td>
<td>3:25</td>
<td>2:70</td>
<td>0:41</td>
<td>0:68</td>
<td>0:41</td>
<td>0:24</td>
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<tr>
<td>do</td>
<td></td>
<td>5:50*</td>
<td>3:65</td>
<td>2:55</td>
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<td>0:60</td>
<td>0:38</td>
<td>0:20</td>
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<tr>
<td>do</td>
<td></td>
<td>5:70*</td>
<td>3:05</td>
<td>2:45</td>
<td>0:41</td>
<td>0:66</td>
<td>0:40</td>
<td>0:26</td>
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<tr>
<td><em>A. fuscens</em></td>
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<td>5:25</td>
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<td>0:35</td>
<td>0:58</td>
<td>0:36</td>
<td>0:19</td>
<td></td>
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<tr>
<td>do</td>
<td></td>
<td>5:20</td>
<td>2:60</td>
<td>2:35</td>
<td>0:32</td>
<td>0:58</td>
<td>0:36</td>
<td>0:19</td>
<td></td>
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<tr>
<td>do</td>
<td></td>
<td>5:30</td>
<td>2:90</td>
<td>2:35</td>
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<td>0:59</td>
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<td><em>A. rufescens</em></td>
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<td>4:50</td>
<td>2:55</td>
<td>2:00</td>
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<td>0:44</td>
<td>0:29</td>
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<td>3:08</td>
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<td>0:56</td>
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<td>do</td>
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<td>5:40</td>
<td>2:90</td>
<td>2:55</td>
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<td>0:58</td>
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<tr>
<td>do</td>
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<td>5:20</td>
<td>2:80</td>
<td>2:20</td>
<td>0:32</td>
<td>0:57</td>
<td>0:34</td>
<td>0:23</td>
<td></td>
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<tr>
<td>do (Eur.sp.)</td>
<td></td>
<td>2:95</td>
<td>2:35</td>
<td>0:33</td>
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<td>0:37</td>
<td>0:24</td>
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<tr>
<td><em>A. Holbrooki</em></td>
<td>♂♀</td>
<td>5:25</td>
<td>2:83</td>
<td>2:25</td>
<td>0:37</td>
<td>0:54</td>
<td>0:33</td>
<td>0:20</td>
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<td><em>A. exilipes</em></td>
<td>♂♀</td>
<td>6:00*</td>
<td>3:25</td>
<td>2:75</td>
<td>0:33</td>
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<td>0:28</td>
<td>0:28</td>
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<tr>
<td>do</td>
<td></td>
<td>6:00*</td>
<td>3:30</td>
<td>2:82</td>
<td>0:34</td>
<td>0:65</td>
<td>0:30</td>
<td>0:28</td>
<td></td>
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</tbody>
</table>

* Of skin. † Measurements taken from Bp and Schl.

1861.] 25


Discussion of Synonyms.—As will be seen by the list given at the head of this article, the genus has quite a number of partial and entire synonyms. This has been caused partly by the fact that there are several forms more or less intimately related, to which the present has been referred; and partly by the fact that the two names which have been in most general use for this group,—Linaria and Acanthis,—were both first used in a different connection; the former designating a genus of plants, the latter a genus of birds distinct from the present. Fortunately, however, it is not difficult to refer all the synonyms to their proper types, and determine the name to be employed. We take them up in order.

The type of the genus is presented by Linnaeus as a Fringilla, and subsequently referred by Pallus to Passer. The bird is also given by Koch as Spinus linaria, being considered by that author as belonging to the same genus as the Carduelis elegans (!) (Fringilla carduelis of Linnaeus), which is the type of Spinus. These three names, therefore, become partial synonyms.

Linaria is first used for this genus by Cuvier, in 1817. Bechstein, however, in 1802, applies this name to the Fringilla cannabina Linn., and if the name is to be retained for any genus of birds, it must be for that one of which the F. cannabina is the type. But Bechstein’s name is itself superseded by Linaria of Tournefort, of 1717, which is the designation of a genus of plants; since, according to the rules of nomenclature, the name cannot be again employed in any other connexion.

Linota of Bonaparte, of 1838, has as its type Fring. cannabina Linn.; but becomes a partial synonym of the present genus because that author included in it the Fring. linaria Linn., at that time considering the two forms as only sub-generically distinct. Linota, however, in any event, would have to yield to Cannabina of Brehm, of 1826, which is based upon the same type (Fring. cannabina Linn.), and has priority.

“Acanthis, Keys. et Bl.” (1840), is used by Bonaparte in his Conspicua for this genus. The type of Acanthis of Keyserling and Blasius is, however, the Fringilla spinus Linn., a form generically distinct from the one now under consideration, and the name consequently cannot be used in this connection. But even if it were based upon the Fringilla linaria Linn., it would be superseded by Acanthis of Meyer (1822), and of Bechstein (1802), both of which are founded upon a different type (Fringilla carduelis Linn.), and have priority in point of date.

Thus it happened, somewhat singularly, that up to the year 1851, this very marked and well known genus had received no tenable distinctive name. At that date Ægiothys was proposed by Cabanis, and is now in general use.

We quote Linacanthus Des Murs, 1853, upon the authority of G. R. Gray, not having an opportunity of verifying it. The identification of the names of Bechstein and Koch in the preceding paragraphs, are upon the authority of Cabanis.

Ægiothys Rostratus Coues. Nov. sp.

Ding.—A. Ægiothys fuscescenti coloribus similis, sed multo major (A. canesceti staturae par), rostro maximo, robustissimo, arcuato, fusco; ventre plerumque fusco-striato.

Mas nupt. temp. pectore carmesino, uropygio rosaceo.

Fem. et mar. juv. colore haec desunt.

Long. 6-00 poll. ala 3-25, cauda 2-70; rostr. long. 0-41.

Tarsus 0-68, dig. med. 0-41, ung. 0-24.


Description. (Male, adult, summer plumage; Jacobshavn, Greenland). The bill is enormously large for this genus, but very slightly compressed, the tip but little acute; the lateral outline is nearly straight; the culmen and gonys are both decidedly convex, and much rounded, having but slight indications of
the sharp ridge of *linarius*. The commissure is about straight; but the depression of the tip of the upper mandible, which gives the convexity to the culmen, causes it to be a little decurved. The bill is higher than broad at the base, and so vaulted and arched as to resemble that of *Cannabina* or even *Carpo-
dacus* rather than of *Egyptius*. It is mostly of a dusky horn color, but the cutting edges, and a great portion of the lower mandible are light bluish horn color. The nasal plumuli are short, scarcely covering more than the basal third of the bill, and are rather scant. The front, lores and a gular spot are dusky, as in all other species of the genus, the feathers of the former having slightly wavy tips. The pileum is deep crimson. The sides and back of the head and neck, and the upper parts generally to the rump, are blackish brown, scarcely relieved by the dull brownish yellow which margins the feathers so very narrowly as to give an almost uniform dusky aspect to those parts. The rump, though lighter than the rest of the upper parts, is so merely in consequence of the fading of the dull yellowish margins of the feathers into white, it being streaked with dusky almost or quite as thickly as the back itself. The wings and tail are deep dusky brown, very narrowly margined with whitish, most conspicuous on the inner secondaries, but even there much narrower than in any other species except *fuscescens*. The light borders and tips of the median and greater coverts are also reduced to a minimum, being scarcely broader than the margins of the primaries. The under parts are dull white; the sides of the neck, breast and body, and the under tail coverts thickly streaked with well defined lines of deep dusky; the throat, breast, sides of the head and body, and the rump, suffused with rosy, which deepens into carmine on the breast, and is palest on the rump and sides under the wings. The streaks on the sides of the body extend quite across the lower part of the breast; but the middle of the belly and the abdomen are unspotted. The feet are brownish black, large and stout, but are not disproportionate to the size of the bird. They have much the same comparative size and relative proportions of tarsus and toe, as in *linarius* or *fuscescens*. The claws are all short, blunt and little curved, even more so than in *fuscescens*, and differing greatly in this respect from *canescens*, the only species of the genus which equals it in size of body, or in the absolute size of the feet. In the forking of the tail and the proportion of the primaries, it does not differ materially from other species.

*Variations by sex, age, &c.*—The adult female in summer plumage differs in being notably smaller, though the general proportions, and the shape of the bill are preserved. The crimson pileum is greatly restricted. There is only a barely appreciable tinge of rosy on the breast, and none at all on the rump. The breast is instead thickly streaked, like the sides, with well defined dusty lines and spots.

Immature males, and old males in winter, differ from the adult males in summer, merely in having the rosy or carmine much less vivid and more restricted, the feathers of the breast being tipped with whitish.

Very young birds of both sexes differ, as is usual in this genus, from the adults, in a general rufous or yellowish suffusion, more or less intense, especially about the head and breast; and in a general want of the distinct definition of the dusky streaks, which have reddish borders, and fade insensibly into whitish. The streaks on the under parts appear to be more numerous, the middle of the belly only being free from them. In a specimen before us, the rufous suffusion is more decided than we have ever seen it even in *linarius*, its color being deeper and darker, as we should expect from the much darker colors of the adult birds. Immature specimens have frequently the much restricted pileum of a bright coppery rather than deep crimson tint.

*Accidental variations.*—With but a small series of specimens—only nine in number—we are unable to present the variations to which the species is subject as fully as might be desired. As far, however, as we can judge from the specimens before us, they are inconsiderable. But even if they were very 1861.]
great, the species is so marked, and so distinct from any other that there would be no difficulty in recognizing it. The difference in the length of wing of the largest male and smallest female before me is barely three-eighths of an inch. The bill constantly preserves its peculiar size and shape, and in very young birds, still in the downy state, is quite different from that of any other species. The color of the upper parts hardly varies appreciably. The edgings of the wings differ somewhat in breadth, but are never so broad as those of _linarius_. The claws vary considerably in acuteness and amount of curvature; the difference, however, being caused apparently by a greater or less amount of wearing away of the sharp tips.

Comparison with allied species.—The present species, possessing such marked characters, hardly requires comparison with any other except _fuscescens_. As already stated, it is much larger than that species, the difference in the length of the wings being nearly half an inch. The next greatest difference is seen in the bills. That of _A. fuscescens_ is larger and every way stouter than that of _linarius_, but the differences between _fuscescens_ and _rostratus_ in this respect are even greater. As regards color, the two are almost identical, except that in _rostratus_ the dusky streaks of the sides usually extend quite across the lower part of the breast.

From _A. linarius_ and still more from _A. rufescens_, the differences are sufficiently obvious. It differs in color exactly as does _fuscescens_, and, in addition, in the greatly superior size, and the enormously large bill. _A. Holboelli_ has a long and robust bill; but it is bright yellow, not dusky horn color; and the general colors of the bird are those of _linarius_.

In size this species about equals _A. canescens_; but here the resemblance ends. The general very dark, instead of very light colors; the heavily streaked, instead of immaculate sides; the very large and arched, instead of small and conic bill; and the very different proportions of tarsus, toes and claws, with other characters, at once separate the two.

It is unnecessary to institute a comparison with _A. exilipes_, the characters in almost every particular being exactly opposite.

Remarks.—It seemed to us hardly possible that so very distinct a species as the present could, at this late day, have remained undescribed. We accordingly searched with care all the authorities on the subject, which the libraries of the Smithsonian and the Academy contain, but could find no notice of it. Holboell, Temminck and other authors, who admit the _A. canescens_, have gone considerably into detail with regard to its variations and changes of plumage, which, as well as those of _A. linarius_, are now well known, and a pretty definite “theory of variation” of the genus established. But seasonal or sexual changes of plumage, even the most abnormal, could never produce the marked difference in the size and shape of the bill, and the proportions of the feet and toes. Having therefore been unable to find any description which applies even approximately, we have ventured to impose a name, feeling quite assured, that if we are in error in so doing, some one will before long correct the mistake.

The specimens upon which the species is founded were, with one exception, received from the Copenhagen Museum, to which we are indebted for a fine series of several species, kindly transmitted for examination. They are labelled as having been obtained in Greenland.

_Aegithalus fuscescens_ Coues.


_Description._ _Aegithalus linarius_ paululum minor, rostro fusco magno robusto, plumulis brevibus sparsiisque, superioribus partibus fuscis vix luteo striatis, alis caudâque vix albido marginatis, lateribus distinctè nec confluentè fusco-striatis.
Mas nupt. temp. uropygio rosaceo, pectore carmesino.
Fem. et mas jv. pectore albido fusco-striato.
Long. 5.25 poll.; alar. lat. 9.00; ala .2.90; cauda 2.35; rostr. 0.35; tars. 0.58; dig. med. 0.36; ung. 0.20.
Habitat. Amer. Sept. bor. et orient.

A detailed description of the present species, with the points in which it differs from the *Linaria*, has already appeared in the Proceedings of the Academy, as above, and there is consequently no necessity for giving them here. A comparison with the *A. rostratus*, and the differences from that species, will be found under the latter head. The following additional remarks may aid in elucidating the characters of the species.

A small series of specimens from Moose Factory, Hudson’s Bay, differ slightly from the Labrador types in a more elongated bill. The bill, however, still preserves the stoutness, and the dusky color of the present species, and the other characters agree strictly with my original specimens.

Several specimens have been received from Fort Resolution and Simpson, collected by Mr. Robert Kennicott, which agree in the most minute particulars with the Labrador types. Indeed, so far as we can judge from a series of twelve specimens from various localities in northern North America, the characters of the species are more constant than in any other of the genus, showing little or no tendency towards those of *Linaria*, from which there is not the slightest difficulty in distinguishing it.

The figures given by Audubon in his “*Linaria minor* Ray.” come much nearer to the present species than to the *A. linaria*. Moreover, we find in the collection two specimens which were received from Mr. Audubon, and which were quite probably the originals of the plate. The description, however, is undoubtedly that of the true *Linaria*.

Ægiothus Rufescens (Vieill.) Cab.


_Linaria rufescens_, Bp. et Schl. Monogr. Lox. 1850, 50, tab. 54.


_Linaria rubra_ Geßn.; _L. minima_ Br. fide Bp.


_Diag._ A. Ægiotho linario simillimus, sed minor, (long. 4.50 poll.) et caudâ breviore, vix bipolaricari, uropygio plus minus rufescence, fusco-striato. Long. 4 6-12 poll.; ala 2 6-12 ad 7-12; caud. 2; rostr. 3/5-12; tars. 5/4-12; dig. med. 3/5-12.

_Hab._ Europ.

The above diagnosis, taken chiefly from Bonaparte, is that of a European species, admitted by most modern ornithologists. Following the usual custom, we present it as distinct, though, it must be confessed, not without some doubts as to the entire propriety of such a procedure. The characters of the species, as given in the diagnosis, certainly show very slight differences from the *Linaria*. The distinctive features lie entirely in the smaller size, somewhat shorter tail, and, as the name indicates, a general reddish tinge, especially on the rump. But as is well known to be the case in this genus, the young of all the species have this reddish or yellowish suffusion; and in none is it more marked than in the *Linaria*. A specimen of *Linaria* from North America now before me, compared with a *rufescens* from Europe, has the rufous tinge everywhere much stronger than in the European bird, especially on the rump.

1861.]
think that this character is hardly a tangible one by which to separate the two. The length (4.50 inches) and the length of tail ("barely two inches, ") assigned to the species might be sufficient to separate, were it not for the fact that specimens of linarius are to be found, by comparing large series, which approach large specimens of rufescens very closely. In one of these from North America now before us, the tail barely exceeds that of a rufescens appreciably. Still, as we have never seen, out of a large series of specimens, any individuals of linarius so small as to measure only 4.50 inches in length, and especially as the species is admitted by so many ornithologists, we have concluded to present it as distinct. We do not consider that the fact of the occasional occurrence of specimens of two nearly allied species which cannot be distinguished without difficulty as any proof of the specific identity of the two; and, moreover, the few specimens we have examined may not present, typically, the characters of the species.

Acanthis rufescens is given by Bonaparte and Schlegel, in their very valuable work, the "Monographie des Loxiens," rather as a sub-species, or race of linarius, than as entitled to full specific rank. Bonaparte, however, in his Conspicivus, considers its characters as of full specific value. The two authors first mentioned speak of it as follows: "Elle offre quelquefois des teintes, plus vives que le sinister commun; mais il paraît encore exister, entre ces deux oiseaux, par rapport à la taille, un passage graduel, absolument comme celui qui nous avez signalé entre le sinister commun et celui d'Holboll." "Nous avons vu que le sinister d'Holboll se distingue du sinister commun par une taille plus forte; la race"—the italics are ours—"dont nous nous occupons maintenant s'en éloigne en sens contraire, c'est à dire par une taille plus petite."

It should be borne in mind that Temminck, whose authority in matters of this sort is deservedly high, takes every opportunity of strenuously denying the existence of the A. rufescens. He accounts for the discrepancies in size in the following manner: "Il existe, dans cette espèce"—A. linarius—"comme chez la Fringilla cannabina, Fringilla pyrrhula, Alauda cristata, Perdix cinerea, et chez plusieurs espèces d'oiseaux de marais, des individus, souvent des compagnies entières, dont les dimensions sont moins fortes; nous avons observé que ces variétés plus ou moins constantes dépendent de causes purement accidentelles et locales. Il me paraît qu'il est ainsi du Sizerin et du prétendu Cabaret, qu'on veut faire passer comme deux espèces distinctes."

The Fringilla linaria of Temminck, of 1820, is the true linaria: but Temminck's linaria of 1835 is as certainly the present species, race, or variety, whichever it is to be considered. That author, in his brief diagnosis, dwells especially upon the small size, and the brownish rump; and alters the dimensions from five inches (which is more nearly correct for the true linaria), to "quatre pouces cinq ou six lignes," which can only refer to the present species. This identification of his linarius of 1835 is moreover rendered necessary by the synonymy adduced.

Ægiothus linarius (Linn.) Cab.

Passer linaria, Pallas, Zoog. Rosso-As. 1811, ii. 25.
Spinus linaria, Koch, Syst. baier. Zool. 233; fide Cab.
Linota linaria, Holb. F. Greml. 1846, 29.
Diag.—A. rostro tenue, acutissimo, compresso, flavo, plumulis hand densis ad medium porrectis, superius partibus luteis fusco-striatis, lateribus uropygioque semper fusco-striatis, pedibus mediocribus, digito medio cum ungue tarso aequale.

Mas nupt. temp. jugulo, pectore, lateribus, uropygioque rosco tinctis.

Fem. et mas juv. pectore uropygioque albidis, fusco-striatis.

Long. 5.50 poll. ; alar. lat. 9.00 ; ala. 3.00 ; cauda 2.50 ; rostr. 0.34 ; tarsus 0.56 ; dig. med. 0.35 ; ung. 0.22.


Description. (Adult male, in breeding plumage).—The bill is small, slender, exceedingly acute, much compressed, higher than broad at the base, the lateral line very concave; the culmen and gony are about straight; the commisure appears straight to the angle, but the cutting edge of the lower mandible has a considerable lobe towards the base, which being incurved, is concealed by the overlapping edges of the upper mandible in the closed bill. The bill is bright yellow, except the culmen and gony, which are dusky. The nasal plumuli, though not very dense, are considerably lengthened, extending over half the bill. The front, lores and a rather small gular spot are blackish; but the feathers of the first have whitish tips, which give it a hoary appearance. There is a supraciliary streak somewhat lighter than the adjacent parts, but it is illy defined. The entire crown is deep crimson, as in full plumaged birds of all the species of the genus. The sides and back of the head and neck, the upper parts generally to the rump, the scapulars and lesser wing coverts, are variegated with blackish brown and dingy yellowish; each feather having its central portion of the former color, its edges and tip of the latter. On the rump the yellowish mostly disappears, that part being streaked with dusky and pure white. The wings and tail are brownish black or deep dusky; the latter all round, the former only on the outer vanes edged with whitish. The edging is very narrow on the primaries, but on the inner secondaries and tertials becomes broad and conspicuous. The median and greater coverts are narrowly edged and broadly tipped with white, with a tinge of yellowish, forming two transverse bars on the wings. The throat, breast, sides to some distance, with the rump, are tinged with carmine, deepest on the breast, faintest on the rump. This color, though brighter than in canescens, or exilipes, never becomes as deep a crimson as is seen in fuscescens, having always more of a rosy tint. It extends along the throat, not however encroaching on the sides of the neck, quite to the dark gular spot, which it does not invade, but extends on the sides of the head almost to the eyes. Along the sides of the body it reaches quite to the tibie, further than on the middle of the belly. There are no dusky streaks across the breast; but these extend along the sides. They are pretty numerous, much more so than in exilipes, and quite dark; but they are illy defined, and more or less confluent, lacking the sharpness of outline of fuscescens. The under tail coverts have dusky shaft lines. The feet are deep brownish black, moderately long and stout; the middle toe with its claw about equal to the tarsus. The claws are moderately long, curved and acute, and black.

Variations by sex, age, &c.—The old males in winter plumage differ from those in summer merely in having the crimson of the crown less intense; the rosy of the breast and rump lighter and more restricted, the feathers of the breast being tipped with whitish for a greater or less extent; and in a rather more notable amount of yellowish, especially observable on the rump and sides of the breast.

The adult females either want entirely, or have but very slight traces of the rosy of the male on the breast and rump. The latter is generally, except in wanting the rosy tint, much as in the male; but the breast has instead a light dingy yellowish wash, and is streaked quite across with dusky. The female is, moreover, usually smaller than the male.
Immature birds of both sexes hardly differ from each other, except that the young males soon show slight traces of the rosy, which the young females entirely want. The young of both sexes may, however, be readily recognized by the presence of a general yellowish or buffy suffusion, especially about the head and neck, more or less conspicuous. This is sometimes so marked in character as to cause the bird to be streaked above with dusky and reddish brown, and to have the sides of the head and neck, the breast and the sides of the body yellowish brown. The lateral streaks are more indistinctly defined, having borders of the prevailing reddish, which fades insensibly into white. The white edgings of the wings and tail partake of the general buff tinge. At this age also the crimson of the crown is restricted to scarcely more than a frontal patch, and has often a coppery or brazen rather than a deep crimson color.

Accidental variations.—Although this species in common with others of the genus, varies somewhat in size and proportions, in addition to the sexual and seasonal changes to which it is subject, the variations are within narrow limits, and the species readily recognizable through all of them. In a very large series (over fifty in number) from Europe and various localities in North America, the greatest difference in length is hardly over one-third of an inch. The difference in length of wing is about .25 of an inch. The feet do not differ appreciably in length or stoutness, though the claws vary somewhat in length and amount of curvature. The bill is usually very constant, preserving its attenuation and acuteness. Its color, however, differs; sometimes the upper mandible, more rarely the greater part of the lower, are dusky; and on the other hand, the usual gamboge yellow is so bright as to become chrome. The proportions of the quills vary considerably. Usually the second is longest, the first and third equal and nearly equaling the second; the fourth a little, and the fifth considerably shorter. Sometimes the first three are about equal; sometimes the first is absolutely longest: and, again, the fourth is so long, or the first so short, as to cause them to become equal. The variations in plumage, other than those of sex and age, already adverted to, are unimportant. The rump is, in all ages and seasons, conspicuously streaked.

Comparison with allied species.—The present species having been taken at the standard of comparison, the differences between it and other species will be found detailed under their respective headings.

In a critical and extended examination and comparison of an extensive series of specimens from both continents, I have been unable to detect any characters by which to separate the American and European birds. They appear to be absolutely identical.

Discussion of synonymy.—Although this species has a large number of synonyms, these arise chiefly from the numerous genera to which it has been referred. The only points which need discussion here are the following:

The Fringilla borealis Vieill. (not of Temminck,) is certainly the present species, although Temminck places it as a synonym of his F. borealis, which is Linaria canescens Gould. No description accompanies the Linota borealis of Bonaparte's "Index Europearum Avium." That author quotes Fringilla linaria Ray, and Fring. borealis Vieill., which would cause his Linota borealis to become a synonym of the present species; but, if so, he is in error in adding Linaria canescens Gould. It is most probable, however, that he was at that time indisposed to admit the latter as a distinct species. The identification of his Linota borealis with the present species is, moreover, rendered necessary by the synonyms added to his Linota linaria, (Linaria rubra Gesn., and L. rufescens Vieill.) causing the latter to refer to the smaller species, as a synonym of which Bonaparte himself, in his Conspectus, considers it.

The Linaria minor Ray, of Swainson's Fauna Boreali-Americana, is the true A. linarius of North America. L. minor Ray, of Gould's Birds of Europe, is considered by Bonaparte and Schlegel as referring to the A. rufescens. With-
out the original description of Ray before us, we are unable to say to which of the two species his L. minor refers.

Ægiothhus Holboelli (Brehm) Cab.


Diag.—A. Ægiotho linaria major, rostro flavissimo, maximo, robustissimo, elongato, basi tantum plumulis, tecto; macula gulae extensa lorisque nigris; vertice rubro; pectore uropigioque rosaceis.

Long. 5 3-12 poll.; Ala. 2 10-12 ad 2 11-12; cauda 2 2-12, rostr. long. 4½-12 ad 4½-12, alt. 3-12, lat. 2½-12, tarsus 6½-12; dig. med. 4-12, ung. 2½-12; hallux 2½-12, ung. 3½-12.


The preceding diagnosis is of a species, which, like the A. rufescens, is so closely allied to the A. linarius as to render it a matter of some doubt whether it be anything more than a variety or race of that species. Its characters lie in the somewhat larger size, and the very large bright yellow bill with its short plumuli. Never having had an opportunity of examining a specimen of this species, there being none in the Museum of the Smithsonian Institute, or of the Philadelphia Academy, we can express no opinion with regard to its relationships to the A. linaria. It is, we believe, admitted as a distinct species by most later ornithologists, though Bonaparte and Schlegel, in their Monograph of the Loxinae, place it in the same category as the A. rufescens. Having nothing to offer respecting it, we take the liberty of transcribing the remarks made by the authors just mentioned:

"Cette race du Sizerin ressemble sous tous les rapports à l'espèce précédente;"—A. linarius—"mais elle est d'une taille plus forte, et son bec est plus long et plus robuste. Elle est beaucoup plus rare que le Sizerin commun et la petite race appelée Cabaret ou Ac. rufescens. Nous avons examiné un nombre assez considérable d'individus pris en Saxe et en Belgique. On trouve quelquefois des individus intermédiaires entre cette race et le Sizerin, de sorte qu'il existe entre ces oiseaux, un passage semblable à celui qui a lieu entre les Bec-croisés grand et ordinaire."

Temminck places this species ("Holböll's Leinfink" of Brehm) as a synonym of his Fringilla borealis. This, however, is an error, his F. borealis being the Linaria canescens of Gould.

We quote Linaria borealis Schleg. on the authority of Bonaparte's Conspectus. It is, so far as we can learn, the only instance of the application of the name borealis to this species. A discussion of Linota borealis Bp. will be found under A. linarius.

Ægiothhus exilipes Coues. Nov. sp.

Fringilla borealis, Aud. Orn. Biog. v. 1837, 87; pl. 400; nec Vieill.

Linaria borealis, "Temm." Aud. B. Am. 1841, iii. 120; pl. 178, nec Temm.


Diag.—A. Ægiotho linario similis, ejusdemque staturae; rostro plerumque parvo, (sed variabilis) acuto, conico, magna ex parte fusco; plumuli densissimis, sed brevibus; fronte canescente, loris gulaeque macula, atris; uropygio candido, immaculato, lateribus striis paucis confluentibus fuscis; pedibus parvis exilibusque, digitis brevibus; medio cum ungue tarso breviore.

Mas nupt. temp. pectorum uropygioque rosaceis.


Long. 5 50 poll.; alar. ext. 9 00—ala, 3 00; cauda, 2 50; tarsus, 0 30; digit. med. 0 28; ung. 0 22.

Hab. America Sep. bor.

1861.]
Description.—[No. 19,686, adult male, Fort Simpson, 30 Apr. 1860.] The bill is small, short, stout, thick at the base, regularly conical, somewhat compressed, but not so much so as in *A. linarius*, dusky throughout, except the cutting edges. The tip of the upper mandible slightly overhangs that of the lower. The culmen, gonys, and commissure from the angle are all about straight. The nasal plumuli are exceedingly full, dense and heavy, reaching about half way to the top of the bill. They are very much heavier than in *linarius*, and though absolutely shorter than in that species, they are comparatively as long, owing to the smaller size of the bill. The front is dusky like the lores, and more broadly so than *linarius*, but the feathers are tipped with whitish, which gives the forehead a hoary appearance. There is an appreciable light superciliary streak, more distinct than in *linarius*. The lores, and a gular spot are dusky. The crown is deep crimson, exactly as in *linarius*. The general color of the upper part is that of *linarius*; but the dusky streaks are smaller, more numerous and indistinct, especially on the anterior portions of the back; the yellowish is much lighter than in *linarius*, approaching to white. Towards the rump the yellowish tint disappears before the streaks do, leaving a space streaked with dusky and pure white. The rump is pure white, immaculate, with a delicate light rosy tinge. The upper tail coverts have slightly dusky centres. The wings and tail are much as in *linarius*. The primaries are very narrowly edged and tipped with white, the edging becoming quite broad on the inner secondaries. The median and greater coverts are narrowly edged, and broadly tipped with white, forming two transverse bars. The second primary is longest: the first and third equal and scarcely shorter; the fourth a little less, the fifth very much shorter. The under parts are white the throat, breast and belly with a light tinge of rosy, many shades lighter than in specimens of *linarius* of the same age and season. The sides are streaked with dusky; but the streaks are very sparse, and ill-defined, much more so than in *linarius*. The under tail-coverts are almost immaculate. The feet are brownish black, as are also the claws; the feet are much smaller, and weaker than in *linarius*, the difference being especially noticeable in the length of the toes. The middle toe without the claw is shorter than that of *linarius* by about the length of the last joint of the latter species.

Variations by age, sex, &c.—As is usual throughout this genus, evidences of immaturity are to be found in the faintness, or entire absence of the rosy tint of the breast and rump, these parts being lightly streaked with dusky; in the restriction of the crimson of the crown to a frontal patch, and in a general light yellowish or buffy suffusion about the head and fore-breast. The suffusion, however, does not appear to be as deep as that of *linarius*, and some other species. The females are hardly distinguishable from the young males; but the crimson of the crown has usually an orange reflection, and the breast and rump are more thickly streaked. The size appears rather less.

Accidental Variations.—The variations to which this species is subject, other than those of sex and age, are very great, much more so than exist in any other species of the genus. The dimensions of the whole bird; the size, shape and color of the bill; the color and number of the streaks above and on the sides; the extent and purity of the white of the rump, &c., are all liable to great variations. Indeed, almost the only character that is perfectly constant lies in the feet, in their absolute size, and the relative length of the tarsus and toes. With this variation, however, the specimens all have a general resemblance to each other, which, together with the character of the feet, render it easy to distinguish them from any other species of the genus. The precise combination of characters varies with almost every specimen; and there are, moreover, intermediates to be found between all extremes; entirely removing the doubt which might otherwise arise, as to whether there were not two or more species combined in the series of specimens.

In an extensive series, comprising thirty-seven specimens, I have found the
variations to be as follows. The difference in total length of body is rather more than .50 of an inch. The average size is rather less than 5.50 inches. The difference in length of wing from the carpal joint is somewhat over 25 of an inch. In length of tail the differences are about the same. The feet are constant, both absolutely and relatively, the variations being scarcely appreciable. The claws, however, vary quite notably in length and amount of curvature. To express the difference in the feet of this species and the A. linarius, relatively without measurement, we have said that in the former the tarsus exceeds the middle toe and claw, and that in the latter the toes are equal; but this variation in the size of the claws may cause the fact not to hold good in all cases. The bills vary quite notably in size and color, they being sometimes nearly as bright yellow as in linarius; but they are usually almost entirely dusky, and they are never so acutely pointed and so much compressed as in that species, preserving their regular conical shape without much variation. The plumuli vary in color, from dingy whitish to dusky, but are usually of the former color, and are always heavy and full. The upper parts are usually as given in the description; lighter than in linarius, the conspicuous yellowish or buff of that species fading into whitish more or less pure. Sometimes, however, the upper parts are quite like linarius; in other specimens the dusky centres of the feathers become so broad and conspicuous as to give the prevailing color of the upper parts, causing the specimens to approach A. fuscescens in this respect only. In these cases, however, the light edges of the feathers, though so narrow, are nearly pure white, and the rump is very broadly pure white, entirely without streaks, forming a marked contrast. The edgings of the wings and tail do not vary notably, being always nearly identical with those of linarius, but perhaps a little purer. The rump in adult birds is pure white, with a rosy tinge, without spots or streaks; but in immature specimens it is frequently marked with dusky, though never so thickly as in linarius. The dusky streaks on the sides are usually very sparse, and though varying in number and intensity, never become so thick and dark as in linarius. These streaks in immature and female birds frequently extend as slight touches quite across the breast. In adult males the breast is immaculate, with a light rosy tint. In the fullest plumaged males the rosy is always several shades lighter than in the males of linarius of the same age.

Comparison with allied species.—A. linarius being most closely related, in the foregoing descriptions the comparisons have been made with that species. The points of difference may be summed up as follows: The smaller, more conic, less compressed, darker colored bill, with its very heavy and dense nasal plumuli; the different character of the streaks above; the white immaculate rump; the paucity of the streaks on the sides; the much lighter rosy tinge of the breast and abdomen; the smaller, every way weaker feet, with their much shorter toes.

Some specimens—the largest and lightest colored—resemble A. canescens in general appearance, having the same conic bill, heavy plumuli, white rumps, sparsely streaked sides, &c. They may, however, be readily distinguished by the great discrepancy in the size of the feet and claws, those parts in canescens being as much larger and stronger in linarius as they are smaller and weaker than in that species in exilipes.

The species requires no comparison with A. fuscescens, still less so with A. rostratus, the differences from both of those species being sufficiently obvious.

The very large, bright yellow bill, with the short plumuli of A. Holtotti, at once separates that species. The smaller size, more acute bill, less dense plumuli, general rufous tinge and shorter tail of A. ryfescens will serve to distinguish it. Both these species, moreover, have the same character of feet as has the A. linarius.

Discussion of synonymy.—The only name which we have met with which can be referred to this species, is the Pringilla, or Linaria borealis Temm., of Au-
dubon. The identification with the present species, rather than with the borealis of Temminck, which is the true Linaria canescens, Gould, is rendered necessary by the measurements given, especially those of the entire length, and length of tarsus. Moreover, a specimen of exilipes now before us agrees so minutely with Audubon's figure and description, that we have not the slightest hesitation in referring the one to the other.

In the Edinburgh Philosophical Review, as above, there is given, by Bernard R. Ross, Esq., a list of a collection of birds made by himself on Mackenzie's River. This is the same collection that was sent to the Smithsonian; and the Aegithos canescens there mentioned refers to the very series of birds upon which we have based our A. exilipes. The mistake is, however, very pardonable, as the writer had no specimens of the true canescens for comparison; and affords a good example of the caution necessary to be used in identifying specimens from descriptions, especially when so brief as is the diagnosis of A. canescens in the General Report.

Aegithos canescens, (Gould,) Cab.

Linaria canescens, Gould, Birds Eur., 1843, iii. tab. 193.
Linota canescens, Bon. Comp. List, 1838.


Bp. qua Fring. linaria L.

Diag._A. Aegitho bloor major (long. 5-75 poll.), rostro medioeri, conico; plumulis densissimis, superioribus partibus fusco alboque striatis, inferioribus uropygioque albidis immaculatis; cauda elongata, pedibus validissimis, unguis protractus et incurvatis.

Mas nupt. temp. pectore uropygioque roseo inductis.

Fem. et mas juv. pectore uropygioque albidis, fusco-lineatis.

Long. 600 poll.; cauda, 2-75; ala, 3-25; rostrum, 0-34; tarsus, 0-65; dig. med. 0-30; ung. 0-28.

Hab._-Groenlandia. Europ. Amer. Sept.?

Description.—(Adult, Greenland. From Holbøll himself.) The bill is moderate, or rather small for the size of the bird, regularly conic, very stout at the base, where it is as high as long; only moderately compressed and acute; the upper mandible is mostly dusky, the lower, dusky only along the gonyon, the rest being yellowish. The nasal plumuli are very dense, and reach nearly to the middle of the bill; those between the nostrils are grayish, those on the sides of the bill much darker, of the same color as the brownish black lores and gular spot. The front is brownish black, but the feathers have broad, hoary tips. There is a pretty well defined, light superciliaries streak, extending quite to the base of the bill, and including the lateral feathers of the front. The crimson pileum occupies nearly the whole of the crown. The sides of the head, sides and back of the neck and upper parts generally, are streaked with brownish black and white; the feathers have the centre of the former color, and are edged and tipped with the latter. The white is nearly pure, except on the sides of the head and neck, where it has a slight, yellowish tinge. The proportions of the primaries do not differ materially from those of other species. The first, second and third are nearly equal and longest; the fourth is a little, and the fifth considerably shorter. The quills are brownish black, edged with white, very narrowly on the primaries, more broadly on the secondaries; the tips of the greater and median coverts are broadly white,
forming two conspicuous transverse bands across the wings. The tail is brownish black, like the wings, quite broadly edged with white; and is comparatively as well as absolutely longer than in other species. The entire under parts, from the throat, together with the rump, are pure white, entirely without spots or streaks; the breast and rump having a light rosy tinge. The feet are brownish black; remarkably long and strong for this genus, exceeding in this respect those of any other species. The claws are all long, strong, greatly curved and very acute. That of the middle toe nearly or quite equals its digit, and that of the hind toe much exceeds it.

The entire plumage in this species is of a thick, soft, mollipilose character, enabling it to endure the rigors of winter in very high latitudes.

Variations by age, sex, &c.—Immature birds, though preserving the general characteristics and appearance of the adults, differ in several respects. The changes are entirely analogous to those adverted to under A. eclipes. The pure white edgings of the feathers of the upper parts and wings become tinged with yellowish, more or less intense, especially about the head and neck, where there is a general buffy suffusion. This yellowish sometimes becomes very bright and conspicuous. The crimson on the crown is restricted to a patch extending scarcely half way to the occiput. The nasal plumuli and the front are more yellowish, and the dusky lores and gular spot more restricted. The bill is yellowish, except along the culmen and gonyx. There is little or no indication of the rosy on the breast and rump, which, instead, are sparsely streaked with narrow lines of dusky.

According to Holboll, the summer plumage differs from that of winter, chiefly by the narrower whitish edgings of the feathers. The bill is entirely dusky, except along the cutting edges, and very thick, being as broad as high. The old females, and the young males after the first month, differ from the adult males in winter plumage in the entire absence of the rosy on the breast and rump, and in the less purity of the white beneath, the sides being lightly streaked.

Without a sufficiently extensive series of skins, I am unable to present the variations in size, proportions, &c., to which this species is subject. As, however, neither Temminck nor Holboll, as far as I can discover, make mention of them, it is to be presumed that the species is subject to no very remarkable deviations in these respects.

Comparison with allied species.—This species, in its large size, strong feet and claws, general light colors, white rump, &c., is too distinct to require comparison, except perhaps with A. eclipes. The differences will be found detailed under the head of the latter.

Discussion of synonymy.—We have not been able to find where Linaria canescens is first characterized; but, as Bonaparte, in 1838, gives a Linota canescens, the species must have been introduced at least as early as that date. The date of Linota Hornemanni is 1843; and the latter consequently loses the priority claimed for it by Holboll.

The Fringilla borealis of Temminck (but not of Vieillot) is undoubtedly the present species. The diagnosis and the very full description are accurate and pertinent, although the dimensions given ("longueur, cinq pouces"), is below the usual standard. But, while the description is thus applicable to the present species, the author evidently either considers his bird as quite a different one, viz., the common Linaria of Europe and America, or else is in error with regard to the names he quotes as synonyms. For, in giving the synonymy he says: "C'est dans l'une ou l'autre de ces livres très variables suivant la saison, la Fringilla linaria des auteurs tant anciens que modernes, qui ont souvent confondu les deux espèces." He then quotes as synonymous, "La Fringille sizerin," Vieill. (Gal. Ois. 78, pl. 65), and "Le Sizerin boréal," Roux. (Omn. Prov. 165, pls. 101 and 102), both of which refer to the true Fringilla linaria of Linnaeus. He also, in a note under P. linaria, while insisting on the 1861.]
specific identity of *A. linarius* and *rufescens*, says, that—"le Sizerin boréal (*Linaria borealis*) de Vieillot forme une espèce distincte"—from *A. rufescens*—"identique de mon Gros-bec boréal de l'article précédent, mais auquel on ne doit pas réunir le Sizerin ou le Cabaret des auteurs, deux dénominations synonymes de mon Gros-bec sizerin ou *Fringilla linaria* des méthodistes;" clearly mis-identifying Vieillot's bird. In discussing Temminck's names of the *Aegithalos*, it must be borne in mind that he sturdily refuses to admit the specific distinction of *A. linarius* and *rufescens*. He moreover places as a synonym of his *Fringilla borealis*, the "Holbells Leinfink" of Brehm, which later ornithologists, with what propriety I am unable to say, regard as a distinct species.

*Borealis* of Temminck has priority over both *canescens* Gould, and *Hornemannii* Holb.; but as the name was previously applied by Vieillot to the *A. linarius*, it cannot of course be retained.

This name *borealis* has been applied by four authors to as many different species, for neither of which it can stand. *Borealis* Vieillot, is the *A. linarius* (Linn.) Cab.; *borealis* Schlegel, is the *A. Holbüllii* (Brehm) Cab.; *borealis* Temminck, is the *A. canescens* (Gould) Cab.; while *borealis* "Temm." of Audubon is the *A. exilipes* Coues.

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**Dec. 3d.**

**Mr. Lea,** President, in the Chair.

Twenty-two members present.

The following papers were presented for publication:

A revision of the species of Baculites described in Dr. Morton's Synopsis of the Cretaceous Group of the United States, by Wm. M. Gabb.

On *Squalus Americanus* Mitchell, referring it to the genus *Odonotaspis* Agassiz, by C. C. Abbott.

Descriptions of the lower Silurian, Jurassic, Cretaceous and Tertiary Fossils collected in Nebraska by the Exploring Expedition under the command of Capt. W. F. Raynolds, U. S. Top. Eng., with some remarks on the rocks from which they were obtained, by F. B. Meek and F. V. Hayden, M. D.

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**Dec. 10th.**

**Mr. Lea,** President, in the Chair.

Thirty-four members present.

The following papers were presented for publication:

Descriptions of new Paleozoic Fossils from Kentucky and Indiana, by Sidney S. Lyon.

On the Mollusca of Harper's Ferry, Virginia, by George W. Tryon, jr.

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**Dec. 17th.**

**Mr. Lea,** President, in the Chair.

Twenty-seven members present.

A paper was presented for publication, entitled,