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CORVUS, Linnaeus.

Corvus, LINNAEUS, Syst. Nat. 1735. Type *Corvus corax*, L.

CH.—The nasal feathers lengthened, reaching to or beyond the middle of the bill. Nostrils large, circular, overhung behind by membrane, the edges rounded elsewhere. Rictus without bristles. Bill nearly as long as the tarsus, very stout; much higher than broad at the base; culmen much arched. Wings reaching to or nearly to the tip of the tail. Tarsi longer than the middle toe, with a series of small scales on the middle of each side separating the anterior scutellate portion from the posterior continuous plates. Side of the head occasionally with nearly naked patches. Tail graduated or rounded; the outer four primaries sinuated internally.

The true crows are readily distinguished from the other *Corvidae* by the characters assigned above, the *Garruline* forms, with long wings, being distinguishable by other characters. The feathers at the base of the bill completely conceal the nostrils, and extend over the basal half of the bill, or even more. The lateral toes are equal, and reach nearly to the base of the middle claw; the hind toe a little further. The hind claw is a little shorter than its digit, but larger than the middle anterior claw. The lower parts of the postero-lateral plates of the tarsus exhibits a few transverse scutellate divisions.

The determination of the species of crows is a matter of much uncertainty, owing to the uniformity of their plumage, and the fact that it is difficult to find them with the feathers all fully developed at the same time. Nearly one half of all the specimens in the collection before me have some of the quills only partly grown out. There also appears to be much variation in size with age and with locality, as well as in proportions, and I am inclined to think that, contrary to what has been observed to be the case in other families, the *Corvidae* of the same species in southern localities are larger than those from points further north. Should this be substantiated it may tend materially to reduce the number of North American species. Thus the *Corvus cacalotl* may be only a large southern *carnivorus*, the *caurinus* a northern, and var. *floridanus* a southern *americanus*. Four species are certainly permanently distinct: *C. carnivorus*, *C. cryptoleucus*, *C. americanus*, and *C. ossifragus*, whatever be the fate of the others.

The following diagnosis may serve to distinguish the American crows from each other.

A. RAVENS.—Feathers of the chin and throat stiffened, elongated, narrow, lanceolate, and with their outlines very distinct.

Length about 24.50 inches; wing about 17; tail, 10. Outer tail feathers about 1.60 to 1.90 inches shorter than the central one *C. carnivorus*.

Length about 24 inches; wing near 18; tail, 10.50. Outer tail feather about 2.30 inches shorter than the central..... *C. cacalotl*.

Length about 21 inches; wing, 14; tail, 8.50. Outer tail feather about 1.25 inches shorter than the middle one. Feathers of the neck and breast pure snowy white at the base..... *C. cryptoleucus*.

B. CROWS.—Feathers of the chin and throat short, soft, broad, obtuse, and with the webs blended.

Middle toe and claw rather shorter than the tarsus measured from the beginning of scutellae. Inner lateral claw reaching to the base of the middle. Black, with violet reflection on the belly. Length, 19.20 inches; wing, 13 to 13.50; tail, 8 inches.

C. americanus.

Similar to the preceding, but smaller. Length, 16 to 17 inches; wing, 11 to 11.50; tail about 8 inches..... *C. caurinus*.

About the size of *C. americanus* of the north ; the tarsus much longer ; bill larger.

C. var. floridanus.

Middle toe and claw decidedly longer than tarsus measured from the beginning of the scutellae. Inner lateral claw not reaching to the base of the middle. Black, with greenish reflection on the belly. Length 14 to 15 inches ; wing, 10.50 ; tail, less than 7 inches.....*C. ossifragus.*

CORVUS CARNIVORUS, Bartram.

American Raven.

Corvus carnivorus, BARTRAM, Travels in E. Florida, 1793, 290

Corvus corax, WILSON, Am. Orn. IX, 1825, 136 ; pl. lxxv, f. 3.—BONAP. Obs. Wils. 1825, No. 36.—IB. Syn. 1828, 56.—DOUGHTY, Cab. N. H. I, 1830, 270 ; pl. xxiv.—RICH. F. B. Am. II, 1831, 290.—NUTTALL, Man. I, 1832, 202.—AUD. Orn. Biog. II, 1834, 476 ; pl. 101.—IB. Syn. 1839, 150.—IB. Birds Amer. IV, 1842, 78 ; pl. 224.

Corvus cacalott, "WAGLER," ? BONAP. Pr. Zool. Soc. 1837, 115. (Perhaps true *cacalott*).—IB. List, 1838. Probably not of Wagler.—IB. Conspectus, 1850, 387.—MAXIMILIAN, Reise innere Nord Amer. II, 1841, 289. Does not consider it different from European.—NEWBERRY, P. R. R. Rep. VI, IV, 1857, 82.

Corvus lugubris, AGASSIZ, Pr. Bost. Soc. N. H. II, Dec. 1846, 188.

SP. CH.—Fourth quill longest ; third and fifth about equal ; second between fifth and sixth ; first nearly equal to the eighth. Length, about 24 or 25 inches ; extent, 50 to 51 ; wing, about 17 ; tail, 10. Tail moderately graduated ; the outer about 1.60 to 1.90 of an inch less than the middle. Entirely glossy black, with violet reflections.

Hab.—Entire continent of North America. Rare east of the Mississippi.

In this species the feathers of the head above and body are compact and blended ; those of the back of the neck are very smooth and even, but do not show the outlines of each separately as elsewhere. On the chin and throat the feathers are elongated and lanceolate, each one more or less pendent or free, with the outlines distinct to near the base. The bill is very long, (3 inches,) and considerably curved, the upper mandible extending considerably over the upper at the end.

The feet appear very short and stout ; the tarsi with but seven scutellae ; rather longer than the middle toe and claw ; the lateral claws about equal, and extending to a little beyond the base of the middle claw. The fourth quill is longest ; the third about equal to the fifth ; the second considerably longer than the sixth ; the first about equal to the eighth primary. The distances in inches from the end of the longest primary to the tips of the others are as follows :

		1st.	2d.	3d.	4th.	5th.	6th.	7th.	8th.	9th.
5186	Upper Missouri -----	5. 65	1. 60	. 25	-----	. 25	2. 80	4. 35	5. 45	6. 40
5865	Riley -----	5. 30	1. 50	. 25	-----	. 29	2. 30	3. 85	5. 00	5. 70

The tail is quite considerably graduated, the ends of all the feathers being visible from below. The outer is about 1.66 inches shorter than the inner, in one specimen, (5865,) in another, it is 1.90, (5186.)

The color is everywhere lustrous black, duldest on the belly and top of the head. There is generally a strong violet reflection on the lustrous feathers, more greenish on the outer primaries.

In the series before me I find considerable variation in size and proportions, even in specimens from adjacent localities. Thus No. 5865, from Fort Riley, has the bill 1.08 inches high or

eight. The outer lateral toe is shorter, not reaching the base of the middle claw. The middle toe and claw are considerably shorter than the tarsus; the middle claw is shorter than in the northern bird.

The wings formula differs somewhat; the third, fourth, and fifth quills are nearly equal, the third even longer than the fifth instead of shorter. The tail is short and very nearly even, the difference in length of feathers being less than half an inch instead of an inch. This, however, may in part be owing to the absence of the middle pair.

The colors differ somewhat from those of the common crow. There is less violet, and the feathers of the back have almost a brassy gloss on their margins, as in *Orotophaga*.

The specimen upon which these remarks are based, though apparently perfectly mature, is changing some of its feathers, such as the inner primaries, the middle tail feathers, and the greater coverts. The long primaries and ten tail feathers, however, are of full length. It is possible that the bird is really as large as the northern crow, although this is hardly probable. It was killed on the main land of the extreme southern portion of Florida, not far from Fort Dallas.

No comparison of this bird is required with the fish crow, which has the middle toe and claw longer than the tarsus, not shorter, and the proportions much less. It is much larger than the curious little *Corvus minutus* of Cuba, a specimen of which has been supplied by Mr. Lawrence. The *Corvus minutus*¹ is, of course, still smaller than the *C. americanus*, the bill stouter at the base; the third, fourth, and fifth quills nearly equal and longest. The chin is more bristly, the feathers of the throat more distinctly defined. Although about the size of the fish crow, it has much stouter bill and legs, and the tarsus is much longer than middle toe and claw, not shorter. The *Corvus minutus* and var. *floridanus* are more nearly allied in every respect than either is to *C. americanus*. Their measurement will be found in the accompanying table, the first specimen referring to the Florida bird, the second to the *minutus*.

Bartram, in his list of North American birds, (Travels in Florida,) mentions a "*Corvus maritimus*, Great Seaside Crow," but without specifying locality or giving any description. If a Florida bird, it quite probably refers to the present species, which is doubtless quite maritime in its habits.

Detailed measurements of species.

Catalogue number.	Locality.	Sex.	Length.	Stretch of wings.	Wing.	Tail.	Tarsus.	Middle toe.	Its claw alone.	Bill—				Succession of quills from longest.								Specimen measured.
										Along curve.	In straight line.	Gape.	Height at base.	1.	2.	3.	4.	5.	6.	7.	8.	
10374	Florida (<i>floridanus</i>)	♂	.....	.....	12.30	7.68	2.60	1.90	0.52	2.10	1.94	2.22	0.80	4	3.5	....	2	7	8	1	9	Dry ...
do.	do.	.....	19.50	36.00	12.00	.....	.....	.....	.....	.....	.....	.....	.....	...	...	.....	.....	.....	.....	.....	.....	Fresh..
	Cuba, (<i>minutus</i>)	♂	15.10	.....	10.00	6.56	2.12	1.70	0.52	1.90	1.76	1.86	0.76	4	3.5	6	2	7	8	9	1	Dry....

CORVUS CAURINUS, Baird.

Northwestern Fish Crow.

Sp. Ch.—Fourth quill longest; fifth and third about equal; second longer than sixth; first shorter than ninth. Color black, glossed with purple. Tail nearly even. Tarsus longer than middle toe and claw. Length about 16.50 inches; wing about 11; tail about 7.

Hab.—Washington Territory and northwestern coast.

By the above name I wish to indicate a small crow from the northwest coast, which, though

¹ *Corvus minutus*, GUNDLACH, Cabanis Journal für Ornithologie, IV, March, 1856, 97. Cuba.

not much like the eastern fish crow, appears to possess its peculiar habits. In all essential features it is like the common *Corvus americanus*; so much so, indeed, that but for the slight difference in size it would be difficult to tell skins of the two apart. According to Drs. Cooper and Suckley, they are maritime, feeding on the sea beach at low tide, and coming about the settlements with considerable familiarity, being much less shy and suspicious than the common crow. The note, too, is said to be a little different.

The species is readily distinguished from the eastern fish crow by the larger size, the absence of green gloss on the belly; the tarsi longer than the middle toe and claw instead of shorter, and the second quill being generally shorter than the sixth instead of longer. It is so much like the *Corvus americanus* as to be only distinguishable by its inferior size and habits. Indeed, it is almost a question whether it be more than a dwarfed race of the other species.

Crows from California and one from Vancouver (10303) agree, by their larger size, with the eastern *Corvus americanus*, and may thus be distinguished from the *C. caurinus*.

Detailed measurements.

Catalogue number.	Locality.	Sex.	Length.	Stretch of wings.	Wing.	Tail.	Tarsus.	Middle toe.	Its claw alone.	Bill—				Succession of quills from longest.								Specimen measured.
										Along curve.	In straight line.	Gape.	Height at base.	1.	2.	3.	4.	5.	6.	7.	8.	
9811	Puget Sound.....	.....	17.70	.....	11.32	7.06	2.01	1.80	0.50	1.84	1.80	2.03	0.82	4	5.3	6	2	7	8	9	1	Dry....
10310	Fort Steilacoom..	.....	16.00	.....	11.33	7.08	2.13	1.84	0.50	1.59	1.53	1.73	.....	4	3.5	6	2	7	8	9	1	Dry....
10211	.....do.....	.....	17.00	.....	11.00	6.92	2.06	1.75	0.52	1.72	1.58	1.81	0.62	4	3.5	6	2	7	8	9	1	Dry....
10309	.....do.....	.....	16.30	.....	10.92	6.82	2.00	1.78	0.53	1.68	1.60	1.90	0.66	4	3.5	6	2	7	8	9	1	Dry....
10315	.....do.....	♂	.....	.....	10.90	6.70	2.10	1.88	0.53	1.78	1.70	1.98	0.70	4	3.5	6	2	7	8	9	1	Dry....
do..	.....do.....	.....	16.50	32.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Fresh..
10306	Shoalwater bay..	.....	16.10	.....	10.72	6.80	2.12	1.98	0.56	1.60	1.56	1.90	0.64	4	3.5	6	2	7	8	9	1	Dry....
do..	.....do.....	.....	16.50	33.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Fresh..
10308	Fort Steilacoom..	.....	16.40	.....	10.90	7.34	1.96	1.71	0.52	1.85	1.69	2.00	0.66	4	3.5	6	2	7	8	9	1	Dry....
10307	.....do.....	.....	17.20	.....	10.70	6.78	1.96	1.72	0.51	1.80	1.69	1.95	0.70	4	3.5	6	2	7	8	9	1	Dry....

List of specimens.

Catal. No.	Sex.	Locality.	When collected.	Whence obtained	Orig. No.	Collected by—	Length.	Stretch of wings.
9811	-----	Simiahmoo bay, W. T.	Dec. 20, 1857	A. Campbell.....	87	Dr. Kennerly	-----	-----
10310	-----	Steilacoom, W. T.	Feb. —, 1856	Dr. Suckley.....	230	-----	-----	-----
10311	-----	.....do.....	April 25, 1856	.....do.....	322	-----	-----	-----
10308	-----	.....do.....	March	.....do.....	241	-----	-----	-----
10309	-----	.....do.....	February	.....do.....	231	-----	-----	-----
10307	-----	.....do.....	April 25, 1856	.....do.....	324	-----	-----	-----
10312	♂	.....do.....	.....do.....	.....do.....	324	-----	16.50	32.00
10306	-----	Shoalwater bay, W. T.	Sept. 14, 1854	Dr. Cooper.....	96	-----	16.50	33.00