America, has a smaller northern race in Central America. *P. hepatica* of Mexico has, according to Mr. Ridgway, a smaller southern race in Paraguay. In reference to this latter case, and to *Geothlypis poliocephala*, decrease in size southward south of the equator is equivalent of course to decrease in size northward north of the equator.

The instances of decrease in size southward in North American Oscines above-noticed — and they embrace all the marked ones that I now recall—seem to be explainable under and illustrations of the first proposition above cited. In general, North American birds belong either to northern or cosmopolitan types, with a few pertaining to distinctively tropical American groups which are represented with us by a few outlying members; and it is among these that we note the exceptional increase in size southward.

Geographical variation in size in birds has been hitherto discussed chiefly in reference to those of North America, but that the law of decrease in size southward also holds for the birds of Europe and Asia is indicated beyond question, but not at present perhaps equally demonstrable. That south of the equator there is, as there should be on general principles, an increase in size southward among conspecific forms is also susceptible of illustration, but it is beyond the province of this note to enter upon the subject here. Later there may be occasion to take up the matter in detail.

BIRDS OF THE LOWER URUGUAY.

BY WALTER B. BARROWS.

It was in the early days of July, 1879, that the writer entered the waters of La Plata and through the chilly mists which were driven before a stiff "pampero" beheld the great flocks of Gulls and Terns which, during the winter months, make these waters their home. Two months later he was set down in the darkness of early morning on the muddy shore of the west bank of the Rio Uruguay, about 200 miles north of Buenos Aires, at the old town of Concepcion del Uruguay. In the immediate vicinity of this

place most of the observations recorded here were made, and unless otherwise stated it will be understood that all notes refer to observations made at Concepcion.

The whole number of species taken here was rather less than two hundred, but allowance must be made for the fact that only a small part of the time spent here could be given to collecting, and that not unfrequently entire weeks passed without any opportunity occurring for so much as an hour's tramp outside the town.

During his entire stay here the writer was connected with the Colegio Nacional, and it so happened that the times of greatest activity at this institution usually coincided with those periods of increased activity among the birds — the vernal migrations and the breeding seasons.

Excursions were made, it is true, to many points from ten to thirty miles from the town, but these were not often possible, and observations in the main were confined to the country lying directly about the town.

Concepcion lies in about 32½ degrees south latitude, and the range of temperature is from 100° Fahr. in January and February (only observed on two or three occasions) to 38° or 40° in May and June. Yet heavy frosts frequently occur during these two latter months and April, while a change of wind to the north may, even in mid-winter, make the weather oppressively hot during the day.

The region about Concepcion shows considerable diversity of surface, but no hills, and no heavy woods of any extent. Rolling grass-land or prairie alternates with cultivated farm or sterile sand-waste where only the dwarf acacia and spiny cactus seem to thrive. Wherever a stream is struggling for existence a few trees and bushes may be found extending in mute sympathy their scanty foliage, and if we follow such a stream till it emerges into the flood-plain of the river we may find the remains of what were once goodly forests of swamp-loving trees — now decimated by the charcoal-burners in their efforts to meet the demands for fuel of a land practically without mineral coal and in large measure treeless.

By no means all this flood-plain is wooded, and while unmolested tracts of swamp forest still exist, they are yearly lessening in number and extent. And there are vast treeless marshes also where water-birds and mammals have things all their own way

unless an unusually dry season makes their abode convenient grazing ground for herds of cattle, or an unusually wet one brings all flesh into competition along the edge of hard ground, often several miles back from the river margin.

The river itself varies in width from half a mile in a few places to five times that distance in others, while in time of flood ("creciente") it oversteps all bounds and claims the whole valley from bluff to bluff.

Owing to the mildness of the winter comparatively few birds seemed to be really migratory at this place, and from the irregularity of the observations made during the spring, and the fact that only one entire spring was spent at Concepcion, the dates of arrival in most cases can be only approximately inferred.

The few brief visits which were made to large tracts of heavy woods showed that undoubtedly many other species than those actually obtained might have been found there at different seasons or under more favorable circumstances. This is certainly true with regard to birds of prey, several species of which were not met with at all outside of these tracts, though abundant there, while still others were not taken at all, though known to abound in other parts of the province. Another season in the same locality would doubtless yield many other species, yet probably not many which are *regularly* to be found in any considerable numbers were overlooked.

Late in January, 1881, the writer became one of a party delegated by the Argentine Government to make a provisional examination of the fauna and flora of the Pampean Sierras in the extreme southern parts of the province of Buenos Aires, — a region but imperfectly known, and at that time only recently vacated by hostile Indians. Although about ten weeks were spent in this work less than half was of any real value, owing to the lateness of the season, the imperfect organization of the party, etc. The party went by rail on January 25 from Buenos Aires to Azul — over 200 miles south-west; thence forward 250 miles by diligence to Bahia Blanca on the coast in latitude 38½ degrees south, this being the southernmost point reached. From this place the course was north 50 miles by saddle and wagon to the Sierra de la Ventana (Windowed Sierra) and then westward 75 or 100 miles along the base of these mountains and the Sierra de Curumalan to the military posts of Puan and Carhué, at which

last point we arrived early in April, returning thence directly to Azul and Buenos Aires.

During this trip about 800 miles of the pampas were hastily crossed and the largest part of the time passed among the desolate sierras and the hardly more fertile plains at their feet. Collections were made at all favorable points, but, the season being late summer and autumn, the birds taken were largely migrants and nearly all well-known species. Whatever of interest with regard to them was collected has been incorporated in the notes which follow.

1. **Turdus leucomelas** *Vieill.* ZORZAL (THRUSH) of the Entre-Rianos.—This bird abounds at Concepcion the year round, and was taken also at Buenos Aires. It was not observed either at Azul or any of the points further south. It is found in the gardens of the town as well as in the depths of the swampy woods, but never seen far from leafy cover of some kind, and does not appear at home on the ground. It is very unsuspicious and is frequently caged and becomes reconciled to its imprisonment, yet is not very musical. The nest is usually well hidden among the tops of bushes or masses of twining plants, never more than ten feet from the ground, and resembles in general the nest of our own Robin, but is smaller and contains no mud in its composition, so far as my observation goes. The eggs, commonly four, are splashed and dotted with several shades of brown on a dirty green ground. Sets were taken through October and November, and frequently the eggs of the Cowbird were found with them.

2. **Turdus rufiventris** *Vieill.* ZORZAL VIENTRE COLORADO (RED-BELLIED THRUSH).—Less abundant and more retiring than the preceding; seldom seen except in the woods. Resident through the year at Concepcion. In breeding habits precisely similar to the preceding, and the nest and eggs of the two species are generally indistinguishable, though the eggs of the present species would probably average a little larger.

3. **Mimus calandria** (*Lafr. & d'Orb.*). CALANDRIA.—Very abundant and well known, and resident at Concepcion through the year. Undoubtedly a fine singer, but its song, so far as my observation goes, is far inferior to that of our own Brown Thrush (*Harporhynchus rufus*), and cannot approach at all that of our Mocking Bird. I have never heard it sing for more than

a minute and a half or two minutes at a time, and even then the notes were disjointed.

The nest is very bulky, placed within five or six feet of the ground, and composed of sticks, roots, and grass. The eggs, three or four in number, are greenish white, with dots and splashes of brown, both colors varying widely in precise tint in different specimens. Eggs were taken from October 28 until January 15, but doubtless many are laid by the first or middle of October.

This is one of the few large birds regularly imposed upon by the Cowbird. In one case four of the latter's eggs were found in a nest with but two of the owner's.

This species was not met with south of Buenos Aires, unless a single bird was seen near the Sierra de Currumalan. Although this specimen was not taken, there is little doubt that it was *Mimus patagonicus*, which replaces *M. calandria* in Patagonia.

4. **Polioptila dumicola** (*Vieill.*).—An abundant bird at Concepcion among trees and bushes everywhere, many remaining through the entire year, though perhaps not as many were seen during the colder weather. The beautiful lichen-covered nests were frequently found during November; always in plain sight but very difficult to see, and most often betrayed by the birds themselves. They were rarely placed more than five or six feet from the ground,—oftener only three or four,—and almost invariably contained three eggs, which in color and markings were precisely like those of *P. cærulea*.

5. **Troglodytes platensis** *Bp.* TACUARA or TACUARITA;—probably so called from its fretting notes (*taques*).

Abundant everywhere—in the towns as well as in the gloomiest swamps and sandiest cactus patches, and equally abundant summer and winter. It nests, like its cousin *T. aëdon*, in any cavity which takes its fancy. Probably two broods are reared each season, as many were nesting early in October, and fresh eggs were taken as late as January 3, at which time I took a set of seven from the hollow of a decayed stub which overhung the river. In nest, eggs, and song, this bird so nearly resembles *T. aëdon* that anything more on these points is superfluous. From its sociable disposition (towards man at least) one is often surprised to find it in the most out-of-the-way places, as, for example, in the lonely gorges of the Sierra de la Ventana, where its rich song more than once gave me a pleasant surprise.

6. **Cistothorus platensis** (*Lath.*).— Only observed on one or two occasions in the half-flooded meadows which border the stream at Carhué.

7. **Anthus correndera** (*Vieill.*).— Found everywhere in open ground, singly or in pairs in summer, usually in loose flocks in winter. The great variations in color, length of hind claw, etc., have given rise to several named varieties and species, all now referred to this one species. The bird doubtless breeds throughout the whole country, but I was unable to find a single nest or gain any reliable information as to its breeding habits. Half a dozen different birds of about the same size and general color are commonly called by the same name — "Chingolo" — and this bird is rarely distinguished from the common *Zonotrichia*, even by the gauchos, who are usually very observant of all living things found on the pampas.

8. **Parula pitiayumi** (*Vieill.*).—These beautiful little birds, so similar to our own Blue Yellow-backed Warbler, were first noticed at Concepcion July 7, 1880, when a single female was taken. A few days later they became quite abundant and were occasionally seen afterward until about October 1, after which time I did not take any. They were quite partial to blossoming trees, especially willows, doubtless attracted by the abundance of insects there.

One specimen (No. 719) seemed to be abnormal in coloring, showing many white feathers in the forehead; and on skinning, the flesh was found thickly spotted with oval, white lumps about the size of the eggs of the common "blow-fly." These were most numerous toward the surface of the pectoral muscles, but occurred also deeply imbedded in their substance as well as in the muscles of wings and legs. It was not practicable to examine their structure with the microscope until the next day, when decomposition was so far advanced that little could be made out. In all probability, however, they were the encysted larvæ of some parasitic worm, though whether they had anything to do with the abnormal plumage is an open question.

Of the breeding habits of this species nothing was learned, nor was the bird met with at other points visited.

9. **Geothlypis velata** (*Vieill.*). — Abundant in low, bushy ground from early October until late in January, and doubtless breeds. On November 6, 1879, a gaucho brought me a set of

three small eggs taken from a nest of grass, etc., placed in a low bush. He gave a minute description of the bird, which he called "Jilguero," and which could have been no other than the present species. The name "Jilguero" is only properly used for the Goldfinch (*Chrysomitris magellanica*) but any small black and yellow bird would receive this name for lack of a better. The eggs, now before me, are white with a faint creamy tinge and spotted at the larger end with chestnut, the spots on one egg being small and of pretty uniform size, and on the other two coarser with some large blotches; they average .82×.62 inch. The male has a pleasing song, much like a very subdued imitation of the warble of the Purple Finch (*Carpodacus purpureus*).

10. **Cyclorhis viridis** (*Vieill.*).— This bird was frequently met with at Concepcion during spring and summer, being most abundant in July, August and September, but many doubtless remain through the summer and breed, though no nests were found.

The bird's favorite haunts seem to be the tangled thickets and low woods which border the streams and render so many of the river islands almost or quite impenetrable. Here, walled in by netted masses of jasmine, sarsaparilla, and passion flowers, there was little fear of interruption, and the male was often heard pouring forth his strong, clear warble with an energy which always suggested a bird of twice his size.

11. **Progne chalybea** (*Gm.*). GOLONDRINA MAYOR (LARGER SWALLOW). — All the Swallows are known as "Golondrinas," and when it is desired to indicate a particular species an appropriate adjective is used

The present species arrives at Concepcion from the north somewhat later than the smaller Swallows and is not so abundant, though its voice is usually to be heard at any hour of the day during the breeding season.

During October and November the nests are built, — usually in hollows beneath the eaves of houses and sheds. Of the eggs I know nothing.

On October 22, 1880, I spent nearly the whole afternoon in watching several hundreds of this species and *Progne tapera*, catching dragon-flies. A high, cold, south wind ("pampero") was blowing and the dragon-flies were massed by thousands on the leeward sides of the bushes near the top of a bluff. Benumbed

with the cold they only flew when hard pressed, and were then almost inevitably swept by the wind directly into the waiting mouths of the birds. Selecting a bush on which a peck or two of the insects were clinging, I would dislodge them by a sudden shake, and in an instant become the centre of a flock of voracious birds, which seemed to have lost all fear and were intent only on the helpless insects, which were snapped up often within a foot or two of my face.

The dragon-flies were of medium size, having a spread of perhaps 2½ to 3 inches. They did not cling to each other like bees or locusts but simply crowded as near as possible, clinging so thickly to twigs and leaves as to hide entirely the color of the foliage and transform green mimosas into shapeless masses of gray and brown.

12. **Progne tapera** (*Linn.*).—This species appeared in the spring at about the same time as the preceding—about the middle of September—and for some time I did not distinguish it from the female of that species.

In general habits the two species are quite similar, but the notes are somewhat different and the present species is more often found away from the houses than is the common Martin, nor does it, so far as I know, ever breed under the eaves of dwellings. Probably the greater number breed in natural hollows of trees, or in the abandoned nests of other birds. I once noticed several hovering about Woodpeckers' holes in a tall dead tree, and early in November, 1880, saw a female carry a feather into a deserted nest of the Oven Bird (*Furnarius rufus*), where I caught her in my hand as she was arranging the materials of a nearly finished nest.

13. **Progne elegans** *Baird.*—Specimens were taken at Bahia Blanca, where the birds were abundant, and they were frequently seen in the Sierra de la Ventana. While at Carhué and Puan—March 21 to April 9, 1881—none were seen, but the weather was so cold that doubtless they had then gone north. At Concepcion this species was never observed.

14. **Hirundo (Tachycineta) leucorrhoa** (*Vieill.*).—GOLONDRINA (SWALLOW).—By far the most abundant Swallow at all points visited. Arriving from the north early in July, it remains through the summer and does not leave until the following April. Abundant alike in the crowded streets of Buenos Aires and on the monotonous pampas, it is known everywhere by the name

Golondrina, and its appearance after the cold weather is hailed as one of the earliest signs of returning summer. Through October and November it breeds at Concepcion wherever it can find a suitable spot, placing its nest of grass, wool, and feathers in any safe cavity about a dwelling-house or shed, or not infrequently in the deserted nest of a *Furnarius* or *Anumbius*.

From a nest of the latter bird I took a set of this Swallow's eggs — five in number — on October 30, the parent birds hovering close about my head as I examined the nest. The eggs are pure white. During the mating season the male has a very pretty song not unlike that of the Eastern Bluebird, though not as long, and seldom delivered without interruption.

15. **Atticora cyanoleuca** (*Vieill.*).—This species was first seen at Concepcion September 4, 1880, when it was observed in considerable numbers, associated with the preceding species, from which it was easily distinguished by its smaller size and the absence of the white rump. For nearly six weeks it was observed here from time to time, but after October 20 it was not noted until at Azul it was found in large flocks January 27, 1881, seemingly ready to migrate northward. It was seen, however, at Bahia Blanca a few days later and then almost daily until March 28 at Puan, after which it was not again observed. Of its breeding habits I know nothing.

16. **Cotile ruficollis** (*Vieill.*).—Abundant at Concepcion through the summer, arriving from the north early in August. It is said to nest in holes in banks, and I once dug out several deserted Swallow's nests supposed to belong to this bird, though none were seen in the neighborhood. The nests were of straw and feathers at the ends of holes about two feet in depth, and in pretty hard earth which formed a bank eight or ten feet high beside a small stream. A bird of this species frequently visited an open and deep well just in front of my door. I repeatedly saw it descend into the well but could never see it come out, or find it within. Probably it hid itself between the stones of the wall where it was prospecting for a home which it failed to find.

17. **Stephanophorus leucocephalus** (*Vieill.*). CARDINAL IMPERIAL.—A more beautiful bird than this Tanager it would be difficult to find, at least on the Uruguay, and when, in one of those narrow passages between the islands where the trees lean toward each other and solid walls of green rise on either side your

boat, you see a pair of these blue beauties swaying on a slender bush and showing at each turn of the head the snowy crown with its little dash of garnet, while the whole picture lies mirrored in the quiet water, it requires a prompt choking of all poetic feeling to make sure of your bird. Otherwise the next instant may find you looking vacantly at the swaying twig and wondering where the birds — and your senses — are. Although shy and suspicious the birds are really plenty enough, and after you learn where to look for them you may find them in pairs at Concepcion any day in the year. Somewhere among these river-fringes the nest must be built, yet it was always sought in vain.

The male during the breeding season has a strong, sweet warble recalling that of the Pine Grosbeak, but at other times both sexes are very silent, giving only a faint, quick chirp of alarm as they disappear.

18. **Tanagra striata** (*Gm.*). NARANJERO (ORANGE BIRD). — This well known and widely distributed species is abundant at Concepcion through the year and many undoubtedly breed there, but I did not meet with the nest. When seen at a little distance and in motion this bird always reminded me of the Baltimore Oriole, to which, indeed, it bears no little resemblance both in color and action.

The name "Naranjero" comes from a popular belief that the bird feeds on ripe oranges, and is given to several different birds which frequent the orange trees more or less. I have never seen any evidence, however, of any of the fruit being eaten by them.

19. **Tanagra cyanoptera** *Vieill.* NARANJERO AZUL (BLUE ORANGE BIRD). — The least common of the Tanagers, but occasionally observed, both summer and winter. A female taken November 6 had evidently just finished incubating.

20. **Pyranga saira** (*Spix.*). — But little more abundant than the preceding, perhaps really not as plenty, but its red dress makes it much more conspicuous. It was only observed during the early spring, and no evidence of its ever breeding in the vicinity of Concepcion was obtained. The specimens observed were silent, sluggish, and not very wary.

21. **Saltator aurantiirostris** *Vieill.* JUAN-CHIVIRRO (imitation of its note). — The voice of this bird is much better known than his form. It would be impossible for one to row along the woody shore of the Uruguay a hundred yards in spring-

time without hearing the hearty voice — more emphatic perhaps than beautiful — but you might often row on for miles without a single glimpse of the bird himself.

He stays all winter at Concepcion and doubtless breeds there during the summer, but the nest and eggs were not taken.

22. **Guiraca glaucocærulea** (*Lafr. & d'Orb.*). — Not uncommon during spring and summer, with habits and song much resembling those of our Indigo Bird, which it so nearly approaches in plumage. Of its nesting habits I am ignorant, though it certainly breeds about Concepcion.

23. **Spermophila cærulescens** *Vieill.* CORBATITA (LITTLE CRAVAT, in allusion to the black collar and white band above it). — Early in November these birds arrive in Concepcion from the north and soon become very common everywhere, but seem to prefer bushes, hedges, and tall weeds.

During the first week in December many nests were found which occasionally contained but one egg each, and never more than two, which seemed to be the normal number. The nests were very neat affairs, made entirely of fine grass, roots, and hair; so closely woven as to be very strong, yet so thin and delicate that the eggs could often be seen through the bottom. The nest was sometimes placed in a mass of fine twigs to which it was bound, but oftener it was only fastened to three or four vertical twigs which passed through its rim, thus making the nest semi-pensile. Rarely was it more than four feet from the ground. The eggs were white with dark flecks. Late in the summer the birds gather into loose flocks or small parties and turn northward again.

24. **Spermophila palustris** sp. nov.

Adult male: breeding plumage. Above, from bill to rump, clear bluish-ash; below, from bill to middle of breast, including lower eyelid, ear-coverts, and sides of neck, pure white; rest of under parts, rump, and most of upper tail-coverts, bright cinnamon-brown. Wings and tail brownish-black edged with whitish; inner secondaries deep black, their tips and outer edges broadly white (pure in highest plumage, at other times soiled or even rusty); a white patch across the base of all the primaries except the first two. Bill and feet black; iris dark. Length, about 4.50 inches; extent, about 7.00; wing, about 2.18; tail, about 1.70.

In some individuals, even in high plumage, the ashy feathers of the back show blackish centres.

Adult female: breeding plumage. Above, uniform greenish-olive obscurely streaked with dusky; below, light yellowish-buff; wings and

tail nearly as in male but duller, and the inner secondaries with narrower and more yellowish edgings; white spot on primaries same as in male. Upper mandible brown, lower pale yellowish. Length, 4.15 inches; extent, 6.65; wing, 2.07; tail, 1.65.

A male, seemingly immature, yet taken at the same time as the others and in breeding condition, has the upper parts precisely like those of the female, except that most of the greenish-olive is replaced by brownish-olive; the edgings of inner secondaries are broader and lighter, and the rump shows several cinnamon feathers. Below, the color is a mixture of pale buff and cinnamon, all the feathers of the chin and throat showing hoary tips, while the middle of the belly is nearly pure cinnamon.

An adult male taken in late summer (Feb. 2, 1880) is not essentially different from specimens taken in November and December. The areas of color are the same; the white is soiled, the cinnamon pale and dull, the ash of head and back has given place to a dirty gray by the wearing away of the tips and edges of the feathers, and the inner secondaries have lost their light edgings in the same way.

This diminutive Finch seems to resemble *Sporophila hypoxantha* (Cab.) more than any other member of the genus, and it would not be strange if a careful comparison of *palustris* and *hypoxantha* in their different plumages should result in the fusion of the two under one name. As no specimen of *hypoxantha*, however, is at present available for comparison, reference to its descriptions alone is possible, and if they are correct there can be little doubt of the specific distinctness of the present species.

Early in February, 1880, two specimens of an unrecognized Finch were seen by the writer on the edge of a marsh at Concepcion where coarse grass is cut for thatching the houses of the humbler classes. One of these birds was secured and pronounced by Dr. Burmeister of the Buenos Aires Museum to be new to the fauna of the region, so far as he was aware. A careful lookout for other specimens was kept, but nearly ten months elapsed before another individual was taken.

Resting one hot November noon in the scanty shade of a bush on the edge of one of the large marshes which border the lower Uruguay, my ear caught the notes of a song which seemed at first to be that of the common Goldfinch of the country (*Chrysomitris magellanica*) but which, as it rambled on, developed a variety and sweetness far beyond the powers of that bird. An attempt being made to approach the bird, however, it developed other powers of a more practical and (to me) less satisfactory kind, and it was only after a half-mile chase through an indescribable mixture of land, water, and grass — the latter predominating — that a lucky third shot brought it down and a long hunt

among the roots of the eight-foot grass brought to light this tiny *Spermophila*.

Before the gun had been reloaded, or the bird wrapped up and put away, another male appeared, and in the course of an hour or two three more specimens, all males, were added to the first. Many more were seen and several killed, but the nature of the ground made it very difficult to mark them down and find them, while their motions were so quick, and the grass so thick and high, that not one shot in three counted. No females were seen at this time, but within the next two weeks four more males and two females were taken.

That they were nesting in the marsh there is little doubt, but that the nest escaped detection is not strange. The birds were never seen in flocks nor did they often associate with the "Corbatitas."

The males were oftenest seen chasing each other over the marsh or pausing on the top of some tall grass stem or blighted bush to pour out their delightful song.

Occasionally I caught a glimpse of a small bird in a flock of *Sycalis luteiventris*, which seemed to be unlike anything except this little *Spermophila*, yet may easily have been mistaken. Our little Finch is too fond of the open marsh, the society of the Wood Ibis and Courlan, and the rustling of the knife-edged giant-grass, to be found far from such haunts, and so long as he swells his snowy throat only in such company he need fear little from man.

(*To be continued.*)

DESCRIPTIONS OF NEW SPECIES OF BIRDS FROM SANTO DOMINGO.

BY CHAS. B. CORY.

Contopus frazari. General plumage grayish-olive; feathers of the crown dark brown, edged with olive; throat ashy, becoming olive on the sides of the breast and yellowish-brown on the abdomen and crissum; wing-coverts pale at the tips, forming two very dull wing-bands; secondaries very narrowly edged with pale brownish-white; tail brown; under wing-coverts pale yellowish-brown. Length, 5.40; wing, 2.45; tail, 2.65; tarsus, 50; bill, .50.