

## CHAPTER I

# **PROLOGUE**

It was on a wintry afternoon in February 1889 that I, a young medical student of nineteen, returning home from my classes in the University of Edinburgh, picked up at the book-stall in Waverley station a number of *Nature* which determined the whole future of my life: for therein I read the following letter:

# Opportunity for a Naturalist

Captain Juan Page, of the Argentine Navy, who is now in London, and read a paper on the exploration of the Rio Vermejo and Rio Pilcomayo at the last meeting of the Royal Geographical Society, has undertaken a new expedition for the survey of the Pilcomayo from the Paraná to the frontiers of Bolivia. Captain Page would be glad to give a place on the Staff of this Expedition to a naturalist, who would have the opportunity of investigating the almost unknown flora and fauna of the Gran Chaco, through which the Pilcomayo runs. The Expedition will start from Buenos Ayres in June next, and be absent about six months. The naturalist would have to find his passage out to Buenos Ayres and home, and his own equipment and collecting materials, but on joining the Expedition would be free from charges. I should be glad to put any qualified person who might wish to avail himself of this excellent opportunity of exploring a most interesting country in communication with Captain Page.

P. L. SCLATER

Zoological Society of London, 3, Hanover Square, London, W. February 4.

I had been an enthusiastic reader of books on exploration and natural history—Waterton's Wanderings in South America, Darwin's Voyage of the Beagle, Bates's Naturalist on the Amazon—and now that paragraph in Nature seemed to open a portal through which I might pass from my lecture room and laboratory haunts of the past three years right away into the realms of romance.

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In due course it was all arranged; I managed to pick up a Vans Dunlop scholarship to ease the strain on the limited means of my father, a retired Indian official.

The necessary arms and equipment were got together: an excellent Express :45 rifle by D. and J. Fraser, a 12-bore gun—cylinder bore in order to take, on emergency, spherical bullets, a :476 Webley W.G. revolver and a smaller :45 ditto. To supplement a large supply of ammunition—mainly No. 9 but also some No. 3 for larger game as well as a few cartridges with spherical 12-bore bullets—reloading apparatus and materials, arsenical soap, botanical drying paper and wire frames, dissecting instruments, microscope and accessories, half-plate photographic camera and plates, clothing suitable for rough tropical wear, field glasses, aneroid and compass, tinplate and soldering apparatus for the construction of tanks to hold spirit specimens.

Eventually all was ready and on Saturday 1st June I set out on my journey.

Everyone is roughly familiar with the continent of South America as it appears on the map: its roughly triangular form, the great range of mountains along its western edge—interpreted by some of us as a great crinkle of the earth's crust being gradually forced upwards by differential movement between the superficial crust and the more rapidly rotating core—and the great estuary on its south-eastern side named by the early Spanish explorers the Rio de la Plata, the River of Silver, suggested by the silver ornaments worn by the aboriginal inhabitants, nowadays vulgarised into the River Plate. To the west of this inlet and extending far to the north and south lies the great estuarine plain known in its southern part as the Pampa and in its northern as the Gran Chaco—both of them names of uncertain origin.

The Pampa-Chaco plain—almost dead level apart from occasional slight undulations—slopes gently to the south-east as is shown by the generally N.W.-S.E. course of its tortuous rivers. These streams flowing from their source in the Andes become greatly diminished in volume by evaporation during their plain course. Eventually they are brought up against the escarpment formed by a great geological fault running almost due north and south along the western edge of Brazil, Paraguay and the Argentine province of Corrientes, and are deflected southwards in the form of a single great river which broadens out into the River



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Plate, and is known in its northern portion as the Rio Paraguay and in its southern as the Paraná. Pampa and Chaco have no sharp line of demarcation but it may be said that the southern limit of the Chaco corresponds roughly with the entry of the River Paraguay into the Paraná.

On Sunday, 2nd June, I sailed from Southampton on the Lamport and Holt liner *Maskelyne*—flying the Belgian flag as she was carrying the mails between that country and South America. I found myself in luck in having as a fellow-passenger the Hon. Francis Pakenham, H.M. Minister in Buenos Aires to whom I had potent Foreign Office recommendations. From His Excellency I learned much of interest about Argentina and the Argentines and later on I was to owe him a deeper debt of gratitude.

After a voyage of twenty-five days uneventful except for a call at Madeira—my first glimpse of a really foreign country—and a somewhat narrow escape from foundering in a violent pampero off Cape Frio in Brazil—we reached the River Plate and anchored off Monte Video on 27th June. Near us at anchor was a ship unloading a cargo of Welsh steam coal and it was interesting to think not merely that the purchase money, one pound per ton, would find its way back into Welsh industry, but still more to realise that once the unloading was completed there would be ready available an empty ship to carry back food or raw material to England at greatly reduced freight. The incident served to drive home an important lesson in practical economics as regards the back and forth movements of our overseas trade.

After a short stay at Monte Video we passed on up the wide estuary with its muddy fresh water dotted with green floating islands of camelote (*Pontederia* or *Eichornea azurea*) from the tropical waters of the great rivers away to the northward, and in the morning of 29th June reached Buenos Aires. In these days ships anchored in the Outer Roads, 15 miles out from the swampy shore. Landing was a complicated business—by steam tender, boat and finally bullock cart—the wonderful quays and docks of later days being still non-existent.

For the forthcoming expedition there had been constructed by Messrs Bow, McLachlan and Co. of Paisley, a flotilla of four vessels ('Escuadrilla Pilcomayo y Bermejo') and these, shipped in the form of separate plates, were now being riveted together in a Buenos Aires shipyard. Their construction was as yet not

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nearly complete, and it would clearly be near the end of the year before they would be ready for our voyage upstream, so I determined to devote the intermediate period to improving my equipment in the matter of practical knowledge of South American natural history. In Buenos Aires itself was the excellent national museum of natural history, where I found a kindly teacher Dr Hermann Burmeister, formerly Professor of Zoology in the University of Halle and author of the well-known Reise durch die La Plata-Staaten (Halle, 1861). Then there was the southern bank of the estuary-later to be occupied by the docks and quays of Buenos Aires but at this time a stretch of swampy ground harbouring a wonderful richness of bird life in which I was allowed to wander without interference and make my first acquaintance with the birds of Argentina. Presently there came my great opportunity for the further development of this acquaintance when, through the good offices of the Page family, I received an invitation to visit a friend of theirs, Don Benjamin Carbonell, who owned the estancia of Mate Grande, some 50 leagues to the westward, near the little town of Nueve de Julio, the then terminus of the Western Railway.



#### CHAPTER II

## THE PAMPA

At 7.15 on the morning of 13th August I set out by train from the station Once de Setiembre, so called, as is customary with place names in South America, after the date of an important national anniversary. The first half of our six-hour journey lay through the inner camps as they are called, almost as flat as a cricket field, covered with close green turf, the native pampa grasses having succumbed to the introduced species, and dotted here and there by a solitary Ombú tree (*Phytolacca dioica*) the one tree indigenous to and characteristic of the Pampa. As the Argentine poet Dominguez has it:

Cada comarca en la tierra
Tiene un rasgo prominente,
El Brasil su sol ardiente,
Minas de plata el Perú,
Montevideo su Cerro,
Buenos Aires—Patria hermosa—
Tiene su Pampa grandiosa;
La Pampa tiene el Ombú.

Every region in the world
Has its special feature,
Brazil its burning sun,
Peru its mines of silver,

(TRANSLATION)

Monte Video its hill, Buenos Aires—beautiful country— Has its stately Pampa; The Pampa has its Ombú.

Farther out the country became more undulating, varied by rushgrown lagoons from which rose up flocks of waterfowl disturbed by the train. The Ombú disappeared and the dry ground was now covered by the great native grasses of the Pampa.

Between 1 and 2 o'clock we reached Nueve de Julio, laid out on the usual South American plan with streets running at right



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angles to one another and surrounding a central square or plaza. The inhabitants with their soft felt hats, poncho and wide trousers or bombachos, went about armed either with revolver or a large knife (facon) stuck in their waist-belt behind—and one could not help correlating with the universal carrying of arms ready for use the admirably courteous manners of the inhabitants.

After waiting a couple of nights in the vain expectation of my baggage turning up, I set out on the 8-league journey to Mate Grande. The vehicle was a four-wheeled trap or 'volante' drawn by five horses urged on by the native driver with wild whoops into a sharp canter or gallop as soon as we got clear of the town.

It was a perfect spring morning, the air crisp and bracing and the ground lightly dusted with hoar frost during the early hours. The road was a mere track across the open Pampa, still uninterrupted by fencing; in parts across smooth green turf where one noticed the curious softness of the motion due to the entire absence of stones, though every now and then one was thrown into the air as a wheel sank into a burrow. Our journey varied in character—a free gallop across an area of level turf, a slow progress through swamp, or a cautious threading our way through a laguna with the water up to the axle-trees. The season being early spring the tall grasses of the Pampa were brown and withered but here and there, most usually on the slope overlooking a lagoon, would be a stretch of beautifully green closecropped turf with a cluster of burrows like those of the rabbit but twice as big which one recognised as a Biscacha village. It being daytime the rightful owners were not visible but here and there by the opening of a burrow were a pair of charming sentinels, little Prairie Owls (Speotyto cunicularia), sitting bolt upright, close together, motionless as statues, except their heads slowly rotating to keep an eye on us as we passed. By the edge of a laguna a flock of dark-coloured Ibises (Plegadis guarauna) probed the mud with their long bills, while by another a group of tall Flamingoes (Phoenicopterus ignipalliatus) of a rosy pink colour seemed to be dreaming away their existence motionless upon one leg, their long necks coiled up on their shoulders. A great Stork (Euxenura maguari) daintily picked its way among the tufts of long grass on the look-out for snakes or other such animals tempted out of their winter sleep by the warm sunshine. Round us flew a cloud of Lapwings (Vanellus cayennensis), much like our own though rather



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larger and armed on each wing with a formidable-looking pink spur, uttering harsh cries of teru-teru. Of the smaller birds the most conspicuous were flocks of the starling-like Icteridae, one with a yellow breast (Pseudoleistes virescens), another (Leistes superciliaris) with breast and gorget of the most vivid scarlet.

Soon after midday that wonderful drive was brought to an end by our arrival at Mate Grande—the estancia house a low-roofed three-roomed cottage, with kitchen, office, and staff accommodation in detached ranchos constructed of poplar trunks filled in with mud and straw, mud floor, and roof thatched with large rushes. The whole was surrounded by a thick plantation or monte, of poplars, weeping willows, peaches, acacias and a laburnum-like tree with drooping racemes of large white flowers.

A cordial welcome from my host Don Benjamin Carbonellscion of a family of wine merchants well known in Thackeray's day-followed by breakfast of the usual Spanish American kind -soup made with fat freshly killed beef; puchero-the solid content of the soup—beef, pumpkin and rice; asado—roast beef: the whole washed down with vino Carlon—a coarse red Spanish wine. I ought to mention the unfailing aperitif—an admirable cocktail of caña or rum. Don Benjamin was known far and wide as a real artist in cocktails; he was most particular about their trimmings—in particular running a bit of fresh lime (fruit) round the edge of the glass and then inverting it in pounded sugar and taking care that the bottom of the glass contained a cube of pineapple of the proper stage of ripeness. The eye-opener which he unfailingly brought me before I got up, much as to-day one would be brought one's morning tea, would sometimes be followed by quite a series fitted on to the calls of thirsty neighbours.

My first breakfast at Mate Grande marked the commencement of three months of extraordinary kindness and hospitality accorded to me by Don Benjamin and his companion Don Patricio Kavanagh. My daily routine was pretty regular—the early hours devoted to natural history; breakfast—the beef being killed the same morning—it is well known to those with experience that the most perfect beef in the matter of tenderness and flavour is that which is cooked before rigor mortis has set in; a short siesta, then more natural history, dinner, cards—vingt-etun, euchre or écarté—bed.



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An occasional break would come from a visit to a neighbouring estancia to breakfast or dine and sleep. These involved a few miles' ride across the Pampa—not at the tiresome artificial trot as at home but at the delightfully untiring 'galope' or canter. Happy memories I have of these rides and of how my favourite mount, apparently at the extreme of exhaustion on the outward journey, used to fly like the wind when his head was turned homewards.

In those days the surrounding Pampa was unfenced and the cattle able to wander hither and thither. To keep an eye on them were outposts from the main estancia settlement, each a small rancho inhabited by a puestero. These always received one hospitably but before dismounting it was customary to call out a greeting 'Ave Maria'. In response the puestero would appear, and reply with 'Sin pecado concebido' and one would then dismount, leave one's horse with the reins over its head, and accept the proffered 'mate a la bombilla', i.e. 'Paraguayan tea'—an infusion of the leaves and twigs of the 'yerba mate' (Ilex paraguayensis) served in a gourd (mate) and imbibed through a silver tube (bombilla).

Each estanciero's stock bore his particular brand and periodically there took place a rodeo or round-up for the branding of the young animals and the sifting out of aliens belonging to neighbouring estancias. To these rodeos came gauchos from far around and one saw beautiful work with the lasso and the bolas.

After the main work of the day there would be races and an occasional quarrel would be marked by pretty fighting with the facon—a large knife—carried by the gaucho at the back of his waist. The poncho was wrapped round the left arm which served as a guard and also to distract the adversary's attention by flicking the fringe up into his face.

One also heard wonderful tales of the exploits of particular famous gauchos.

Apart from such occasional breaks my time was given to making acquaintance with the plant and animal life of the Pampa, a low-lying undulating land covered with coarse grass and varied in the distance by an occasional monte marking the position of an estancia house. After a long succession of wet seasons the hollows were occupied by shallow lagunas averaging a couple of feet or so in depth. Covering their surface in places was a continuous floating carpet of carmine-brown Azalla, here and there inter-



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mingled with Duckweed (Lemna) with its elliptical green 'leaves'. In the deeper, more permanent, parts of the lagunas were dense growths of a tall rush reaching 9 or 10 feet in height, and much of my time was spent in wading about in these rush-beds and observing the ways of their bird inhabitants. Commonest was the little Rush Spinetail (Phloeocryptes melanops) which might be seen hopping nimbly from rush to rush, reaching down every now and then to pick up an insect from the floating carpet of Azolla or Lemna. It first attracted attention by its peculiar voice—several sharp taps as of a slate tapped with a slate-pencil, followed by a long drawn-out squeaking sound like that sometimes made when a tightly fitting cork is twisted in the neck of a bottle. Its nest, firmly tied to a group of rushes about 3 feet above the surface of the water and with blue eggs like those of a hedge-sparrow, is a fascinating little structure built of grass leaves interwoven with extraordinary firmness and covered by a domed roof. Near the top of one side is the little round entrance covered by a projecting eave and leading into a beautifully warm little circular chamber well lined with wool and feathers. Another charming little nest is to be found among the rushes, a cup formed of short bits of grass, etc., cemented together and fixed to a single rush stem about 4 feet above the water. This nest is tenanted by a most beautiful little bird (Cyanotis azarae) belonging to the characteristic South American family Tyrannidae; about the size of a wren, its plumage gleaming with the deepest shades of yellow and black and green.

One of the most fascinating inhabitants of the rush-bed was a miniature heron (Ardetta involucris) which when flushed would fly away a short distance with characteristically weak flight, its long yellow legs dangling downwards, and would then suddenly vanish from view. On stealthily approaching the spot where he disappeared a slight movement of a rush would sometimes disclose him clinging with doubled up legs to the rush stem, displaying a most beautiful example of what nowadays is called camouflage. The back which the bird presents towards his pursuer is of pale buff colour, traversed by longitudinal dark stripes, the whole pattern harmonising perfectly with the light and shade of the rush-bed. The effect is aided by the whole of the bird except the legs being held in a rigid vertical position, the yellow bill being pointed upwards. The obliterative effect is



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still further increased by the long loose plumage of the head and neck which conceals their difference in diameter from the trunk on which the feathers are compact and closely fitting. The claw of the middle toe carries on its inner side a beautiful comb which is no doubt of use in dressing the loose fluffy plumage of the neck.

The nest of this charming bird is an inverted cone of radiating bits of rush stem built among the rushes about 6 inches above the water. The eggs are pale green, elliptical and about 1 inch in length.

The four other species of heron met with at Mate Grande included the white and snowy egrets, but these will be dealt with in a later chapter.

Amongst the rushes too were innumerable nests of coots, ducks, grebes and an occasional stork.

Ducks were extraordinarily numerous, especially during the earlier part of my stay at Mate Grande, every bit of open water swarming with them. There was great variety too, eleven different species being identified. Perhaps the commonest was a beautiful little teal (Querquedula versicolor) with sober vestments of clear grey, its bill blue grey with a yellow patch on each side. Shovellers, pintails and Chiloe wigeons were also abundant on every laguna. Not uncommon was the Rosybill Duck (Metopiana peposaca) a large duck nearly black in colour above and with a large tumid bill of a pinkish red colour. Sailing majestically about some of the deeper lagunas might be seen a pair of Blacknecked Swans or the smaller White Swan (Coscoroba candida). Grebes were abundant and on Mate Grande alone I found four out of the five species already known to occur in the Argentine Republic. The finest of these is the Bright-Cheeked Grebe (Podiceps calipareus) which Charles Darwin observed at Bahia Blanca. Above dark grey, below snowy white and smooth as the finest satin: each ear covert composed of hair-like feathers of shining metallic golden bronze. The commonest of the grebes (P. rollandi) which swarms on every laguna is a much smaller bird with conspicuous white cheeks and dark chestnut underneath.

Mention of the grebes naturally suggests a return to the group of ducks for one of these, the Bluebill Duck (*Erismatura ferruginea*), has adopted the diving habits of grebes and in association with this has assumed remarkable resemblances to them in structure—the wings being reduced in size, the legs shifted back to the hind end of the body, and the breast plumage as satin-like as that of a