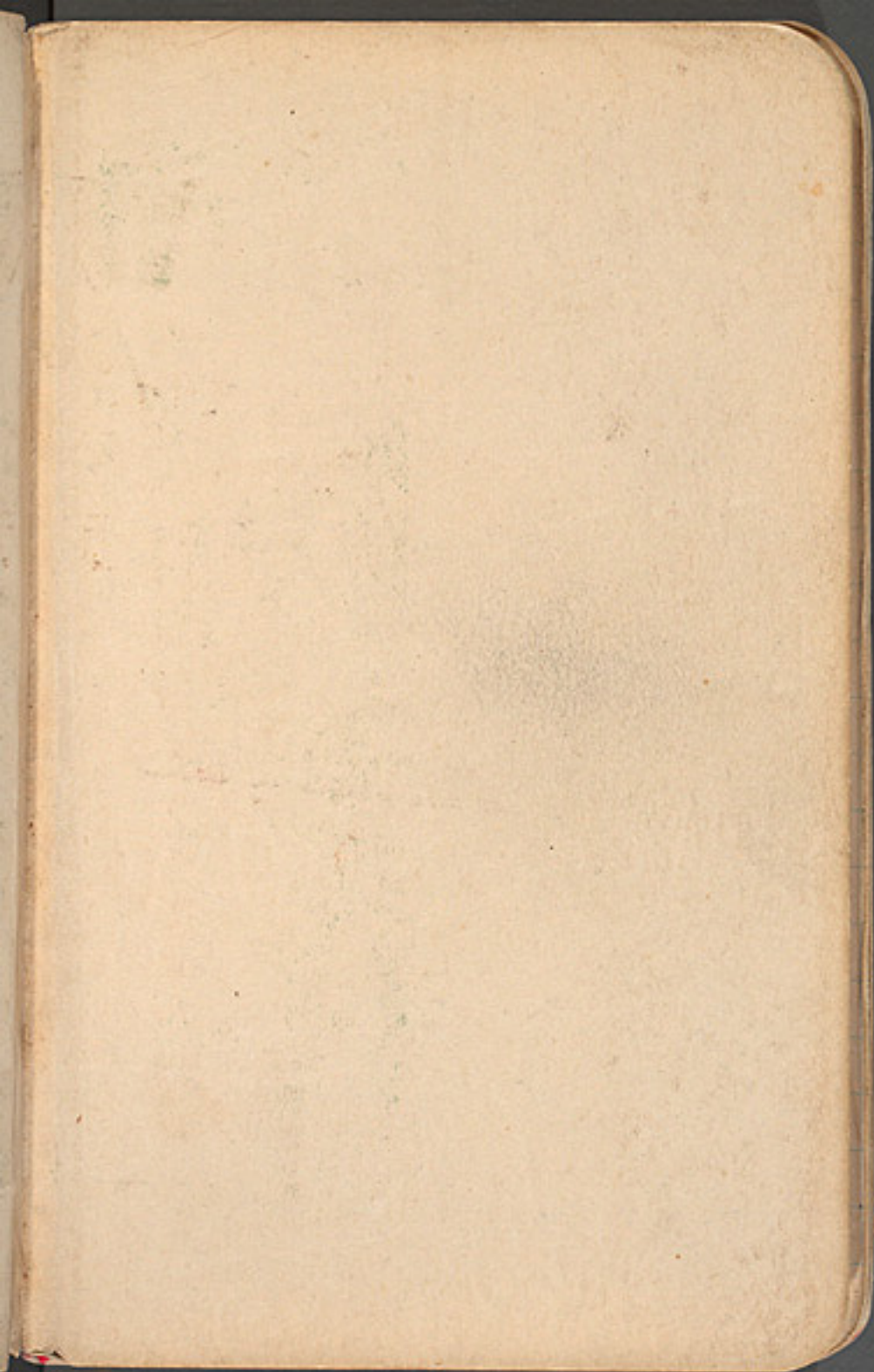


Chapin

May 8-1909 to July 17. 1909.

James Chapin.



Wm Goulding
Goulding

Cote-du-Mont

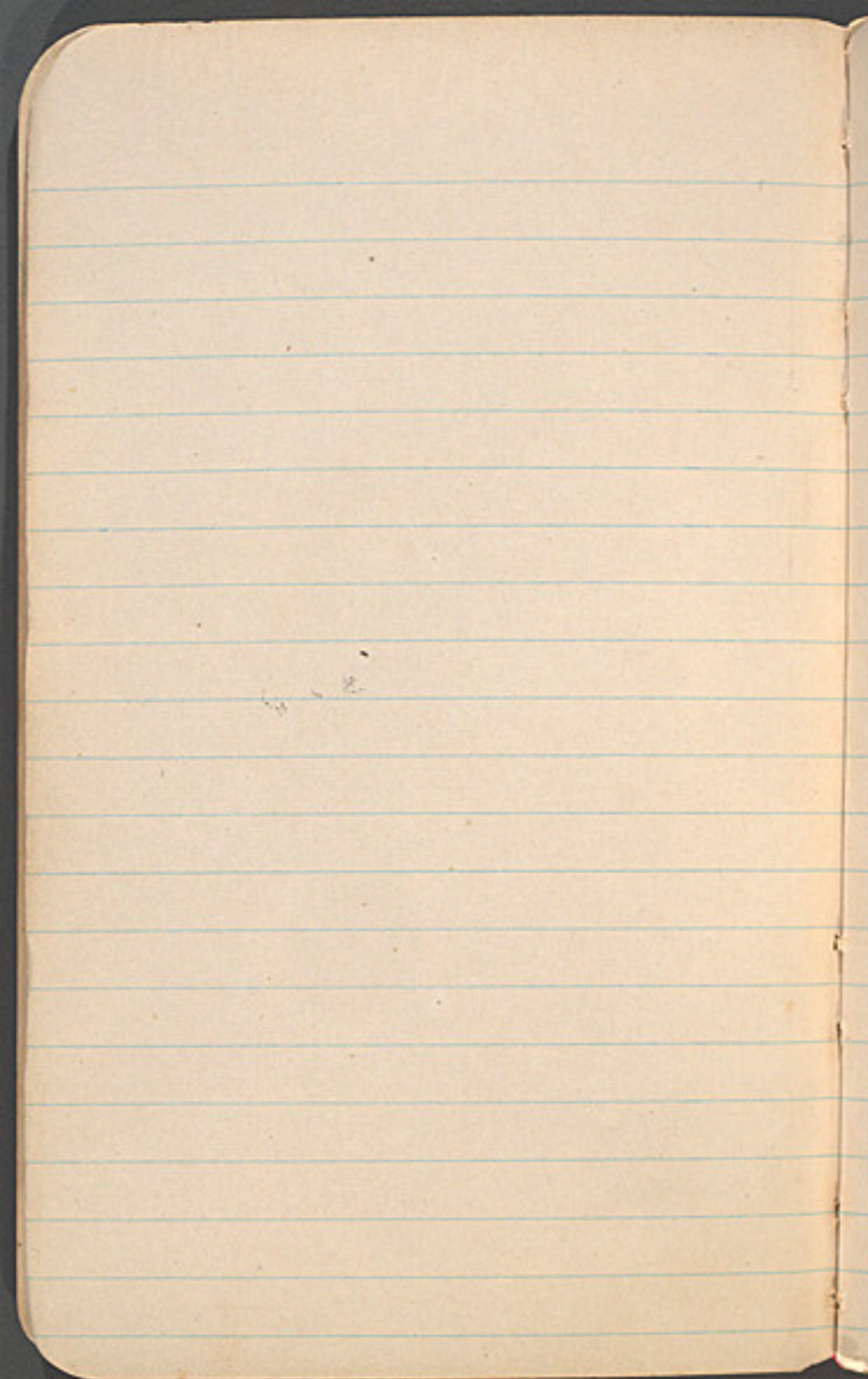
France

Y. Le Boulle

Directeur de la C. B. H. H. et de l'Angono

*par
Lango
Gabon.*

Kakamoeka.



May 8, 1909. (Saturday.)

Sailed from New York, at 11. a.m. on SS "Zeeland". Going down the bay we saw 10 or 15 herring gulls, and off Fort Wadsworth, Staten Id. a flock of at least 50 small gulls, almost certainly *Larus philadelphia*. Weather fair, a fresh easterly breeze.

May 9, 1909. (Sunday)

Weather; foggy almost all day, clearing in late afternoon. Light easterly wind. 349 miles east of Sandy Hook at 12. m. At 9.⁵⁵ am I saw the first petrel of the voyage. A number including 2 or 3 flocks of 30 or 40, seen before dinner; quite common, and almost always in sight, during first half of afternoon. The

largest number seen together was about 150 or 175.

Early in the afternoon a flock of about 25 terns was seen hovering over a spot where the water was disturbed by some large animals, perhaps sharks or porpoises. Late in the afternoon five or six terns were seen flying N. E.

At this same time I also saw a very dark-colored bird, about the size of a small gull, that flew close down along the water, exactly like a shearwater, first taking four or five wingbeats, and then sailing. It might possibly have

been a sooty shearwater. In addition, three large gull-like birds were seen today, but were all too far off to be seen well.

This afternoon, as Mr Lang and I were standing on the port side of the stern, we saw a shark, some 3 or 4 feet long, close in by the ship's side. Not only its dorsal fin, but the tip of its tail as well, stuck out of the water.

May 10, 1909 (Monday)

Weather; fair, sea calm.

717 miles from Sandy Hook at 12. m. Three terns, sitting on a piece of floating wood were the only birds seen in the morning. At about 1.30 P. M. I saw 6 or 8 petrels following the ship, and they kept flying along in our wake, some 100 or 150 yards astern, until after 4.30 P. M.

May 11, 1909 (Tuesday)

Weather; cloudy, one light shower in morning. Wind southerly early in morning, becoming stronger and changing to N. W. In late afternoon it shifted to N. E.

1122 miles from Sandy Hook at 12 m. At 6:10 Am Mr Lang saw 6 or 8 petrels following the ship, and 2 or 3 could be seen in our wake at almost any time during the day.

Between 11 and 12 o'clock I saw a white-throated sparrow (*Zonotrichia albicollis*) which flew around the ship, evidently trying to alight.

About 2 P.M. a ruby-crowned kinglet (*Regulus calendula*) came flying along, and lit on one of the ratlines for a moment, so that I could look at it, thru my glass, at about a distance of 25 feet. At

5⁴⁰ or 5⁴⁵ P.M. I again saw a ruby-crowned kinglet, perhaps the same individual alight for a few seconds near the same part of the boat.

Between 2 and 3 P.M. a white-throated sparrow was flying about the boat again; and around 5²⁰ and 5⁵⁰ two of these sparrows were seen trying to light on the boat. One of them finally hopped around on the deck where I could see it very well. It was in very dull plumage, and was probably, I suppose, a female.

Early this morning Mr Lang and I saw an adult gray rat

near the stern of the ship.

May 12, 1909. (Wednesday)

Weather; cloudy in early morning, generally fair the rest of the day. Strong north wind. 1506 miles from Sandy Hook at 12. m. No birds seen all day.

May 13, 1909. (Thursday)

Weather; fair in morning and early afternoon, cloudy in latter half of the afternoon.

Strong northeast wind. 1880 miles from Sandy Hook at 12. m.

At 11. Am. on the starboard side of the boat. we saw a jaeger skimming along over the water. It flew like a gull, but more swiftly, and I could see its dirty whitish breast, but could not make out any elongated tail feathers.

It seemed to cross our bow,
but I could not see it when
I got on the other side of
the boat.

May 14, 1909 (Friday)

Weather; generally fair,
strong N. E. wind. 2235 miles
from Sandy Hook at 12. m.
Only one bird seen today. It
may have been a jaeger, but
I could not see its color, or
watch it sufficiently to tell.

May 15, 1909 (Saturday)

Weather; fair, fresh
E. wind. 2596 miles from
Sandy Hook, and 707 from
Dover, at 12. m.

Just after dinner this
evening, at 6⁴⁵ P. m. there

were two gulls following the ship. They were apparently a little larger than *Larus philadelphia*, were built more like herring gulls (*L. argentatus*), had white heads, breasts, and tails, and pearly gray backs. The black on the tips of the wings was "cut off" very sharply, the feet were very dark, and the bill apparently greenish yellow. I think they were almost undoubtedly *Larus canus*. They settled down on the water, and were joined by a third gull, of the same sort. This was the last seen of them.

May 16, 1909. (Sunday.)

Weather; fair, fresh easterly breeze. 2969 miles from Sandy Hook, and 334 from Dover at 12.M. Passed Scilly Islands at 1.30 P.M.

At 7.45 am a flock of about 10 lesser black-backed gulls, ^(Larus fuscus) began to follow our ship, and during the course of the morning their numbers increased to about 40.

At about 11 am the first herring gull was noticed, but by 3 P.M. the herring gulls were about as numerous as the black-backs, and by 5 pm apparently outnumbered them. During the

afternoon there were fully sixty gulls following the ship, some flying alongside the stern, and some a few yards behind. At 7 P.M. the number was reduced to 11 or 12, of which only two or three were black-backs. The lesser black-backed gulls were about the same size as herring gulls, perhaps a trifle smaller, and differed principally in the color of the back and the upper side of the wings. Their beaks were of an orange color, very much like those of herring gulls, but

perhaps a little redder. Their feet were of a rich reddish orange color, very different from the herring gulls' feet.

The call of the black backs was quite like that of the herring gulls. A few immature gulls were seen, but I did not attempt to identify them, and they were very greatly outnumbered by the adults.

During the morning I saw 2 or 3 large birds ^{at a distance}, which I suspected were gannets. At about 11 o'clock, however, an adult gannet was flying along parallel

to the course of the ship. I could see its pointed tail, black-tipped wings, gray bill, and the buffy color about the head.

At about 1.30 P.M.

while we were passing to the south of the Scilly Islands, we saw three birds together, flying along close to the water, after the manner of shearwaters, which may have been Manx shearwaters. I saw the black back, and white belly, but they were too far off to observe the shape of the bill.

May 17, 1909 (Monday.)

~~main~~
Weather, cloudy, one or two slight showers: a little sunshine in late afternoon.

We reached Dover, England, about 10 am, and at 5³⁰ p.m. cast anchor in the river between Flushing and Antwerp.

A little before 8 am a flock of about a dozen gulls was following the ship; one of them was a lesser black-back, and the others herring gulls. At Dover there were many herring gulls in the harbor, and a flock of some forty or more were following the steamer when we left. But tho I saw no black-backs while we were near

Dover, there were two immature gulls of that species, about an hour later, among the herring gulls flying behind us.

During most of the remainder of the afternoon no gulls followed the steamer, tho occasionally one or two herring gulls would be seen at a distance.

Up the river a little way from Flushing we saw a large heron, that looked exactly like an American great blue heron, and must have been *Ardea cinerea*, flying along over the water.

May 18, 1909. (Tuesday.)

The "Zeeland" started up the Schelde again at 8³⁰ am., and reached Antwerp at 11. We had fair weather all day.

Just as we weighed anchor I was watching a flock of six or seven black-headed gulls. *Larus ridibundus*, that came close to the stern. At least three of them were fully adult, with dark slaty heads, and red bills. They were very much like *Larus philadelphia* in color, even having a similar white area on the front of the wing. Of the young birds I saw three very well. One had a grayish head,

but much lighter than that of an adult, another had the head white, with only a dark spot on the ear, and the third was intermediate between these two. On the way up the river we saw fully twenty-five gulls, many of which were probably of this same species.

The River Shelde is very wide, in many places, with a great many sandbars exposed at low water, and must provide a feeding ground for many shorebirds. Last evening, at 7.50 we heard the whistle of some bird that bore considerable resemblance

to that of a yellowleg, and this morning I saw a large flock of some small plovers or sandpipers, and a bunch of six shore-birds fully large enough for black bellied plover.

A tern the right size and color for *Sterna hirundo* flew close to the ship on our way up the river, two birds that looked like small cormorants were seen sitting on a sort of signal set up in the river, and a swallow (*Hirundo*) flew overhead.

Along the shore, where sloping muddy banks were exposed by the falling tide, we could see a great

many V-shaped traps,
evidently for fish, made
by planting stakes in the



mud to form
two converg-
ing barriers,
and placing
a sort of wicker
basket at their
junction to

hold the victims.

In the afternoon we
visited the Zoological Garden
in Antwerp. The grounds
tho rather small, are
very well designed and are
kept in excellent condition.
The collection of large
mammals is good, contain-
ing Burchells, Grevy's and
the mountain zebra,

two giraffes, an Indian rhinoceros, four American bison, and a calf, both the Indian and American tapirs, three European elk (*Alces*), polar bears, brown bears, black bears, a grizzly bear, and many other interesting things. The antelopes are well represented, but there are no mammals smaller than a viscacha, a European beaver, coypu rats, and an agouti.

The collection of large birds is very fine, all of them being kept in outdoor cages and enclosures. There are many shovellers (*Spatula clypeata*) Europe-

an widgons (*Mareca penelope*)
European green-winged
teal, Tufted ducks (*Marila*
cristata), pintails,
garganeys (*Querquedula*
circia) muscovies,
mandarin ducks,
Pochards, ^{*Fuligula ferina*} Australian
ducks (*Anas superciliosa*),
four Golden-eyes (*Clangula*
clangula), and a few
wood-ducks (*Aix sponsa*)
There are a few black
swans, and five geese
of the genus *Anseranas*.
with very slightly webbed
feet. Flamingoes are
represented by two large
flocks, and *Porphyrios*
by one large flock. We
also saw a great many

different cranes, some coots and moorhens, a screamer (*Palamedea*), two king condors - one adult and one young, two Bateleur eagles, a *Haliaeetus vocifer* two *Buteo* jackal, an eagle-owl, an African horned owl (*Bubo lacteus*), a snowy owl, and a spectacled owl (*Pulsatrix personata*)

Some black-crowned night herons in the large flying cage had nests in one of the trees.

The smaller perching birds were not very numerous, and consisted largely of native Belgian species, tho there were some weaver-birds,

a hill-tit (*Liothrix lutea*)
a jay-thrush (*Sarrulax*)
and soon. A lark, some
chaffinches, and a
blackbird were singing.
The blackbird's song is
quite robin-like, but
louder and more varied.
Just as we were looking
at the caged blackbird,
a wild one flew overhead.

Over the railroad station,
which adjoins the zoological
garden, some 15 or 20
^(*Cypselus apus*)
swifts were flying.

The collection of reptiles
and amphibians is
small, and is located
in the lion house. Under
the label "*Rana catesbiana*"
"North America", were

some immense toads.

May 19. 1909 (Wednesday)

We are staying in Antwerp, at the Grand Hotel. This morning there were many swifts flying about, and on two occasions three or four of them came down and flew around in the hotel court, making a long, rasping, whistling noise. They fly like *Chaetura pelagica*, first flapping their wings very rapidly, and then holding them rigid. Their forked tails, and larger size are the main points of difference.

At 3 P.M., while walking up the Place de Meir, I saw a starling fly across the street. This is the first wild one I have seen in Europe.

This afternoon we visited the Zoological Garden again, and Mr Lang secured the permission of the director to take photographs there, after which he made about three dozen exposures, largely of birds.

I watched tree ducks, of at least two different species, ^(one of them was *Dendrocygna viduata*.) and saw them dive completely under water, and stay down for some seconds.

We visited the museum attached to the Zoological Garden, which we did not see yesterday. It contains mainly mounted birds and mammals, including an okapi, of which there is also a complete skeleton.

In the large flying cage there is a great black-backed gull (*Larus marinus*), several herring gulls (*L. argentatus*) and about four smaller gulls, which I am sure, by examining mounted specimens in the museum are *Larus canus*. Their plumage is colored about the same as the herring gulls', but the iris is

brown, and the edges of the eye-lids red, the bill grayish green, with a dark ring near the tip, and the feet light gray. They have well developed hind toes, at least for gulls.

As I stood by one of the large mammal yards, a turtle dove flew down and lit on the ground. It may have been only a domesticated individual, but perhaps it was wild.

On our way back to the hotel in the evening we saw numbers of swifts, some of which I saw alighting under cornices and about columns on the fronts of buildings.

When we reached the hotel there were a couple trying to light around inside the court there.

May 20, 1909. (Thursday)

Came to Brussels from Antwerp, on the 10.04 train this morning. Stopped at the Hôtel de l'Europe.

Early this afternoon we paid a short visit to the Royal Museum of Natural History. The paleontological collection there is very fine, consisting exclusively of Belgian material, and containing a number of *Ignanodons*, cavebears,

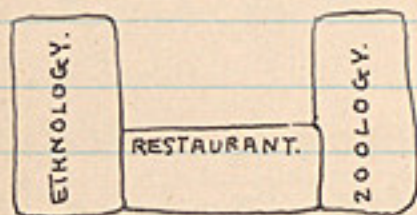
and even material from supposed fossil owl pellets. The systematic collections of mammals and birds are very complete, and well labelled. Of reptiles, amphibians and fishes I saw only the species occurring in Belgium.

May 21, 1909 (Friday.)

This afternoon we rode out to Tervueren on the trolley, visited the Congo Museum, and walked back along the line of the trolley through the famous beech forest.

A new museum building had just been built,

and the hall containing the vertebrates in the old museum was closed during the transfer of the collection to the new building; but by applying to the conservateur we obtained permission to go in.



The collection of mammals was the most important

zoological exhibit. It contains about 4 mounted okapis and 2 mounted skeletons, 1 head and one complete specimen of the square-lipped rhinoceros, a great variety of antelopes,

and most of the other interesting mammals from the Congo Free State.

The bird collection, tho of considerable size, does not compare with the mammals.

The collection of reptiles, amphibians, and fishes is composed of specimens preserved in alcohol. I did not see any salamanders, the only amphibia being two or three species of frogs, about two tree-frogs, and one or two toads.

The collection of fishes contains a great many curious forms, some with long snouts.

After leaving the museum, we walked about the grounds a little, and then followed the tramway back thru the beech forest. Near the museum we heard two cuckoos sing, and found a dead "blind-worm" ^(*Anguis fragilis*).

The European beech is a much taller tree than the American, and has a long, straight bare trunk, with darker bark. There were no bushes in this wood, and one could see a long distance thru it, especially as the beeches are planted in rows.

May 23-09.



Motacilla (cinerea) ^{in Anvers}
(♀ with top of head gray) _{207. 5 cc. mus.}

Motacilla ② 1.

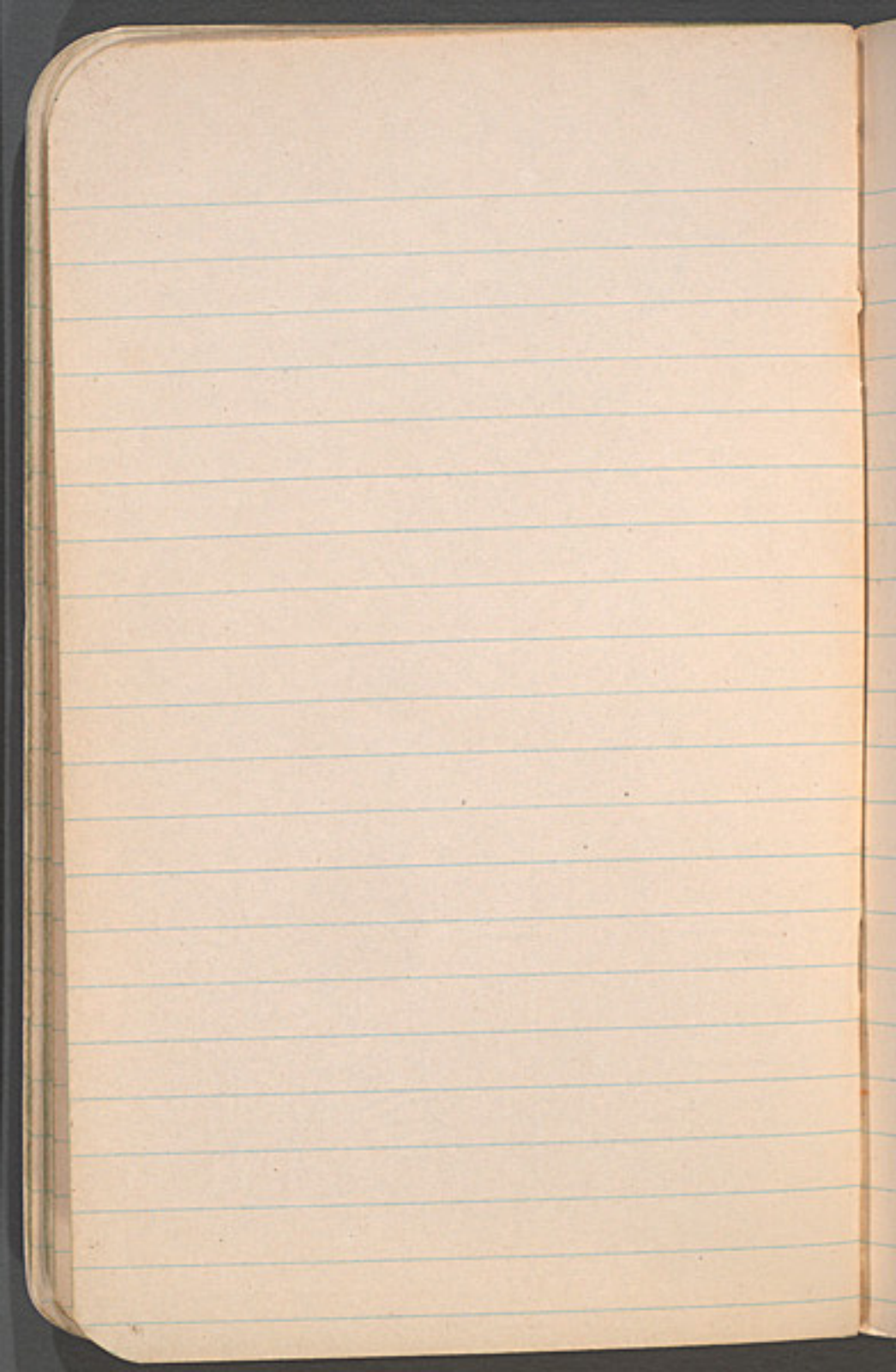
Hirundo rustica ? 12.

Turdus merula 1.

T. musicus ? 1.

Cuculus canorus " 1 or 2 ⑤

Rana (esculenta?) 1.



Just before we reached the trolley station at Tervueren, on our way out this afternoon, we saw a green woodpecker (*Geinus viridis*) sitting on a lawn alongside the track.

May 22, 1909. (Saturday)

Stayed in Brussels all day

May 23, 1909. (Sunday)

I went alone to Tervueren this afternoon, and walked about the park, but did not go in the museum.

There were a great many birds singing, but they were mostly quite high up in the trees, and

there seemed to be a lack of ground-living birds, possibly because there is no underbrush in the woods.

The only birds I recognized were as follows,

Cuculus	H 1 or 2 ⑤
Hirundo	s. 12 or 15. c.
Passer domesticus	
Motacilla	s. $\boxed{1\text{♂} + 1\text{♀}}$ s. 1. [♂].
Turdus merula	s. 1.
T. musicus	s. 1.

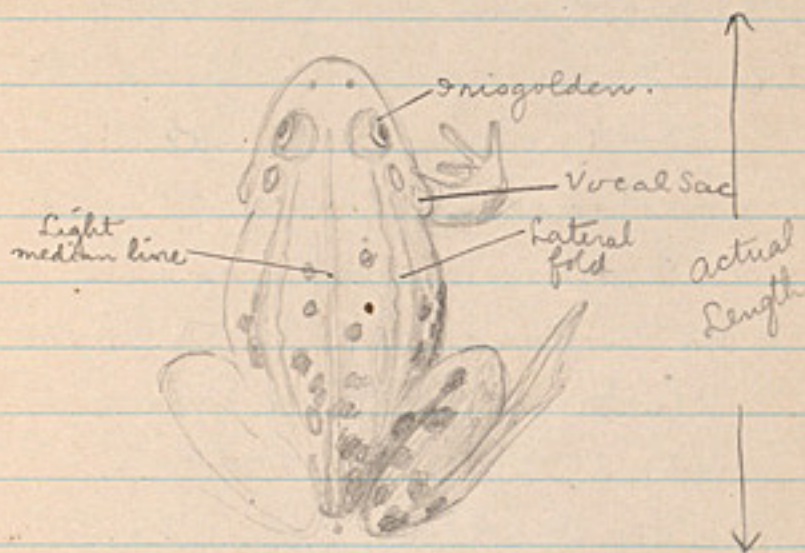
The swallows were very much like barn swallows (*H. erythrogaster*) except for the color of the belly, which seemed considerably lighter.

Their twittering was very much like the barn swallows.

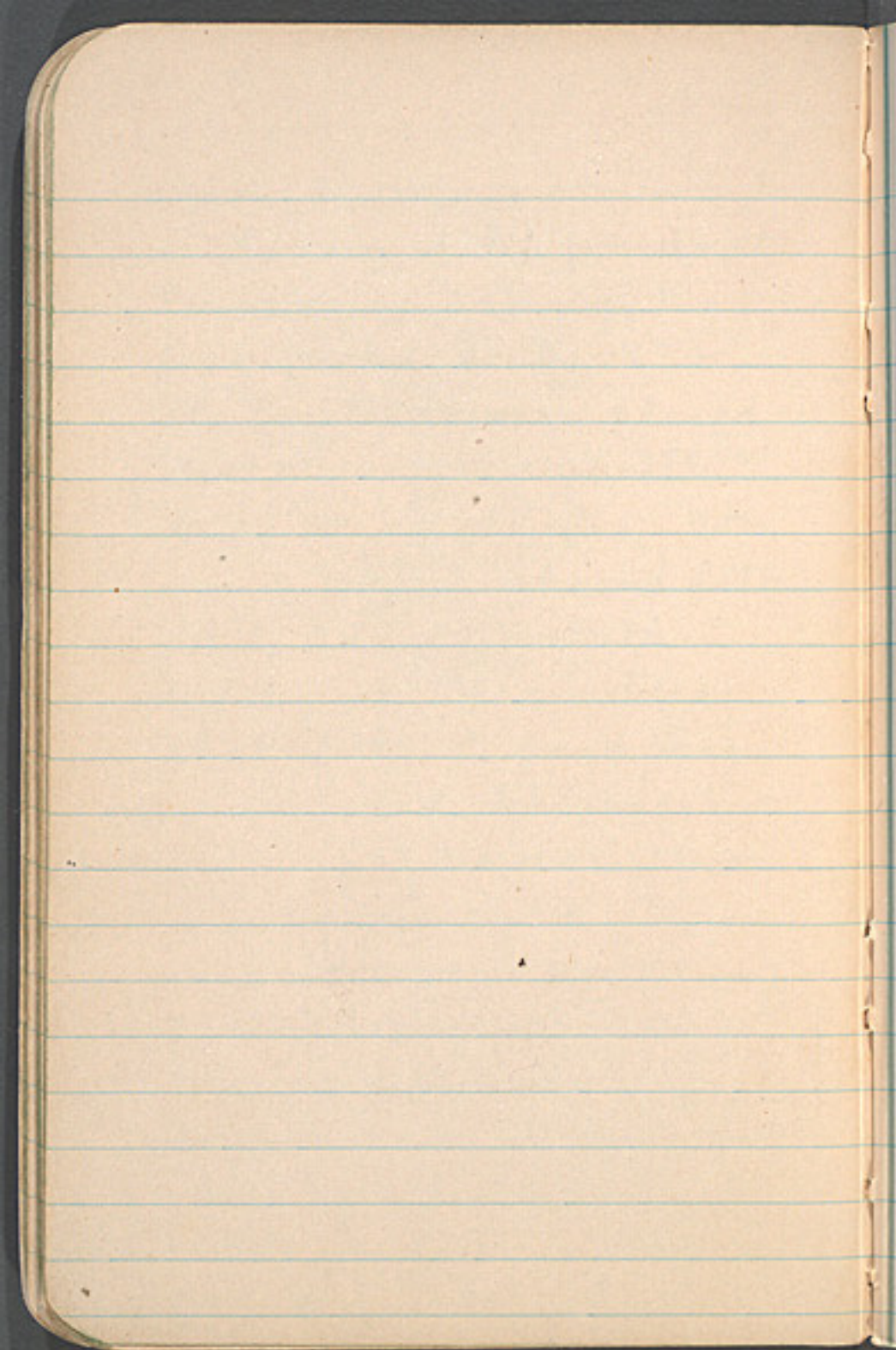
The wagtails were probably *Motacilla* (alba?)
^{or cinerea.}
First I saw a pair of them, the male - his sex was judged only from the black feathers on the crown, was chasing the female - the top of her head was only gray. Later I saw a single individual, in the plumage of a male. While walking on the ground, these wagtails' heads bobbed forward and backward; as soon as they stood still, their tails wagged

up and down.

In one of the ponds at
Tervueren I caught a
frog (*Rana esculenta*?)
Its vocal sacs were placed
at the side of the mouth,
as in *Rana pipiens*. Its
voice, which I heard later,
while I had it at the
hotel, also resembled
that of the Leopard Frog.



Underparts white. General color of upper side of head & back light green, yellowish on cheeks. A light median line running from between the eyes to the anus. Two lateral folds golden brown. Hind legs greenish & light brown, mottled with blackish. Some dark spots on lower part of back, and dark mottling on side of body. Vocal pouches at sides of mouth, as in *Rana pipiens*.



Thursday, May 27. 09.

This afternoon I went to a rifle range just outside Brussels, to try our Mannlicher rifles.

There I saw a lark, a blackbird, and 4 or 5 swallows (*Hirundo*.)

Later in the afternoon, in the park on the Rue Royale, near the hotel, I saw 3 or 4 jackdaws (*Corvus monedula*) and a titmouse (*Parus caeruleus*)
[see next page]

May 27. 09.



Parus caeruleus

May 28. 1909. (Friday)

We visited Tervueren with M. Kervyn late this afternoon, and saw the interior of the new museum building.

From a window I saw 2 or 3 martins (*Chelidon urbica*) flying about and lighting on the ground.

May 30, 1909 (Sunday)

This afternoon I spent in the Antwerp Zoological Garden, and in the park. In the museum of the zoological society I identified a number of the birds I have seen in Belgium. In the garden I saw a wild goldfinch (*Carduelis*) and jackdaw (*Corvus monedula*)

In the park I saw 3 blackbirds (*Turdus merula*), one of them singing, and one hunting earthworms exactly like an American robin. On a lawn there were two starlings (*S. vulgaris*), one an adult, and the other a young bird with the

tail not yet fully grown.

In the eastern corner of the park, on the edge of the pond, were two flycatchers (*Muscicapa grisola*).

They, perched, flew, and acted in general exactly like American "tyrant" flycatchers.

Swifts (*Cypselus apus*) are very abundant both in Antwerp and in Brussels, and are especially numerous, or at least conspicuous, at sunset.

June 1. 09.

Park.

Muscicapa griseola 1. (2)

Tringilla coccyzus 13 (3)

Turdus merula s.l. 11 (5) s.l.

Hirundo rustica s.l.

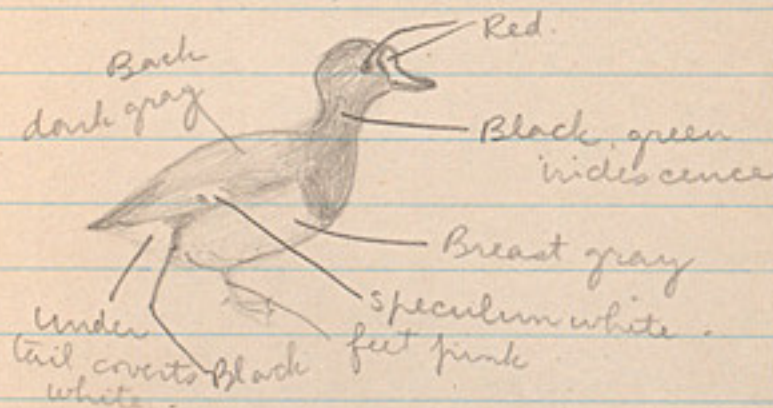
Zoo.

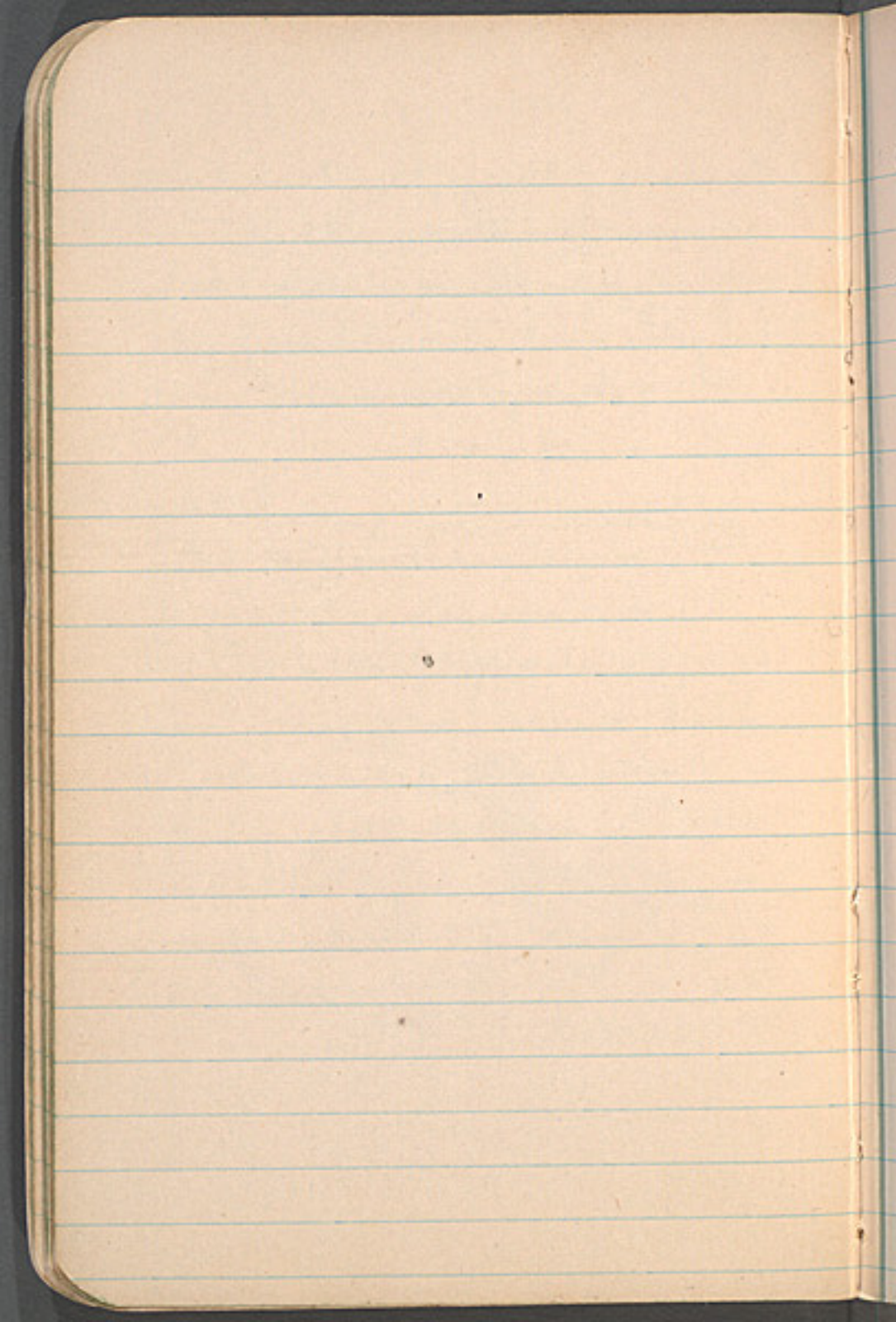
Cypselus apus Abdt.

Coccyzus monedula (3)

Turdus merula 1.

Hirundo rustica 1.





June 1, 1909. (Tuesday)

This afternoon I visited the park and the zoological garden in Antwerp.

The birds seen in the park were as follows,

Fringilla coelebs. 1 ♂ ⑤

Hirundo rustica s/.

Muscicapa grisola s/. s ②

Turdus merula s/. H ⑥ s/.

The wild birds seen in the zoological garden were,

Cypselus apus Abdt.

Corvus monedula s ③

Hirundo rustica s/.

Turdus merula. 1.

June 3, 1909 (Thursday)

We sailed from Antwerp at 11 am on the S. S. Leopoldville. On the way down the Schelde I saw about 6 black-headed gulls, ^(C. ridibundus) 4 swifts (*Cypselus apus*) and 2 swallows (*Hirundo rustica*).

June 4, 1909. (Friday)

Weather, cloudy with light rains in morning, clearing in afternoon.

In the morning a flock of gulls, about half of them *L. argentatus* and half *L. fuscus*, numbering about a dozen began to follow the ship. During the early afternoon there were between

thirty and forty of them,
mostly black-backs.

About 10.15 Am we
saw a small warbler
(Sylviidae) on the boat.
It flew around, lit
on rails, chairs, life-
boats, and once in a
while caught a fly
on the wing. I was
not well enough ac-
quainted with the
members of this family
to identify it. The
back was brownish,
with a green tinge,
and darkest on the
crown. Both the upper
and lower eye-lids, and
a line over the eye, were
light yellowish. Throat

gray, breast and belly a light brownish yellow.

Bill rather large, sides of lower mandible flesh-colored; upper mandible dark brown. When we first saw this bird we were within sight of the coast of France, probably near Cherbourg; but it stayed on board until late in the afternoon at least.

Around noon I saw at least 10 puffins (*Fratercula*). They were sitting on the water, either singly or in pairs, and seemed to be scared up by the ship. They almost always appeared to fly away

toward the land to the south, but three or four of them I saw pretty well.

June 5, 1909. (Saturday)

Weather; cloudy in morning and evening, clear in middle of the day, ^{fresh west wind} Position of the "Leopoldville" at noon, Lat. $45^{\circ} 54''$ N.; Long $7^{\circ} 20''$ W.

The only bird seen today was a murre (*Uria*.) at about 9. am. It flew up from the water on the starboard side of the ship,

crossed our bow, and lit again on the port side.

June 6, 1909. (Sunday)

Weather, generally fair all day, wind west. Position of the "Leopoldville" at noon, ^{Long} $10^{\circ} 26''$ W, Lat. $41^{\circ} 13''$ N.

During the morning I saw 2 gannets, *Sula bassana*, both flying northward, also 4 birds that were probably terns, and about 4 petrels, *Procellaria pelagica*?

At about 11.30 am a flock of about 25 petrels began to follow the ship, and from that time until late in the afternoon a

few of them could always be seen in our wake.

They seemed smaller and browner than Wilson's petrels, but I could see that, in flying, their toes stuck out a little beyond the ends of their tails.

At 12³⁰ P.M. there was also an immature lesser-black-backed gull, *Larus fuscus*, following the ship.

June 7, 1909 (Monday)

Weather; fair, sea extremely calm. Position of the "Leopoldville" at noon. Long. 12° 30' W.
Lat 36° 26' N.

We were followed all day by a flock of petrels. At one

time late in the afternoon I saw fully forty of them fluttering down on the water where there was some refuse from the ship. I watched these birds carefully today, and could see that their toes, in flying, stuck out considerably beyond their tails; but I could not see that there was any yellow on the webs of the feet.

See Cambridge Nat. Hist
Birds, p 65.

June 8, 19
Weather

light breeze
of the "Leop"
Long. 14° 4'

About
half dozen
following
the day
almost
behind t
6¹⁰ p.m. t
dozen.

At al
4 or 5 pe
sort (Pel
upper
and ta
gray,
under
The or

June 8, 1909 (Tuesday.)

Weather; clear all day, a very light breeze from the west. Position of the "Léopoldville" at noon, Long. $14^{\circ}42''$ W. Lat $31^{\circ}56''$ N.

About 9 a.m. there were a half-dozen petrels (*Procellaria*?) following the ship. During the day one or two could almost always be seen behind the ship, and at 6³⁰ P.M. there were fully a dozen.

At about 6 P.M. I saw 4 or 5 petrels of another sort (*Pelagodroma*?). The upper side of their wings and tail were very dark gray, and the belly and under wing coverts white. The one at which I had the

best look seemed to be striking the water, continually, with its feet. They all flew very close to the surface of the water, and without flapping the wings much.

Wednesday, June 9, 1909.

Weather: fair all day.

Position of the "Leopoldville"
at noon. Long. $16^{\circ} 17''$ W., Lat.
 $28^{\circ} 11''$ N.

We reached Teneriffe at 6³⁰ this morning, and cast anchor in the harbor of Santa Cruz. Mr Lang and I were on shore from 7¹⁵ to 9 o'clock. First we bought 13 fish in a market on the

dock, and then we walked out to the rear of the town. There there were some cultivated fields; but the ground was exceedingly dry and stony. There were many birds singing, but the only ones I saw well were some sparrows, and 2 wagtails, with yellow breasts, gray backs, and black throat patches. The sparrows were like *Passer hispaniolensis* having very white cheeks, and black streaks down the sides. Their notes, however, seemed exactly like those of *P. domesticus*.

We saw many lizards but they were very active,

and always sought shelter among the rocks when we approached. They were of at least two different colors, some brown, with longitudinal stripes, and some blackish, with blue patches on the sides.

On some large cacti, like the American prickly pears, there were a great many plant lice, with a white fluffy substance adhering to them. I took a few and put them in alcohol. We also collected four spiders and two or three ants on these cacti. I saw two bees, rather

large and hairy, black all over except for the hind part of the abdomen, which was white; but I could not catch them.

On this part of the island the vegetation was rather scanty except in the village.

As we went back to the steamer in a launch, we saw one or two gulls like herring gulls, and at about 11 o'clock, shortly after the Leopoldville left Teneriffe, I saw two large shearwaters, with gray backs and white bellies. At 6 am, while we were approaching Teneriffe

I had also seen a shearwater of the same sort.

Late in the afternoon I noticed a flock of a dozen or more petrels (*Procellaria*?) following in our wake.

June 10, 1909. (Thursday.)

Weather; fair, wind moderate, north. Position of the "Léopoldville" at noon, Long. $17^{\circ} 7' W$. Lat. $23^{\circ} 24' N$.

Before breakfast this morning I saw three flying fish. the first I had ever seen alive. They

shone brightly in the sunlight as they sailed along on their expanded fins, and somehow they made me think of huge insects rather than fish.

At 10.15 a.m. three large black swifts (*Cypselus*?) flew past the ship together, making for the north, toward the Canary Isles. A little before lunch Mr. Lang said he saw a swallow (*Hirundo*) alight on the steamer.

A flock of petrels, ^(*Procellaria*?) varying in number from 15 to 40 followed us all day long, and I saw several ahead of, and at the side of the ship.

June 11, 1909. (Friday.)

Weather, fair, moderate northerly breeze. Position of the "Leopoldville" at noon, Long. $17^{\circ} 45''$ W. Lat. $18^{\circ} 35''$ N.

Before breakfast this morning I saw fully 25 flying fish, and during the rest of the day they were quite numerous. A couple of schools I watched must have contained at least 60 or 70 each.

Petrels were very numerous today, at one time in the afternoon there were fully 75 following the ship.

About 7⁴⁵ am I saw three shearwaters, like

those seen at Teneriffe
last Wednesday.

This afternoon we
caught a moth like a
Sphinx, sitting on the
side of a bench near the
stern.

In the evening, looking
down into the water
beside the ship, and in
our wake, one could
see many small flashes
of bluish light, emitted
by some small organism,
I suppose, such as
Noctiluca.

June 12, 1909 (Saturday)

Weather, fair, light westerly breeze. Reached Dakar at 9 a.m., left at 12.m.

Before breakfast this morning, there was a flock of petrels (*Oceanites*?) following the *Leopoldville*, and, as we approached Cape ^{Manuel} Verde, there were a great many terns, one flock of which must have contained at least 125.

I also saw a gull, about the size of a herring gull, with gray back, and white breast, head, and tail, but with a peculiarly shaped black patch on the wing tips. (see sketch)



Stercorarius



Larus sp.

There was also a swallow flying about the ship this morning. It had a moderately forked tail, white throat, breast and belly, and metallic green upper parts, except for the rump, which was white, as in *Chelidon*.

When we entered the harbor of Dakar, all the petrels left us. There I

saw a gull that looked exactly like *L. fuscus*, and also another resembling an immature individual of that species, except that the sides of the breast were spotted, whereas they were white in all the young *L. fuscus* I have seen.

Around the town and harbor of Dakar were a great many kites (*Milvus*). I counted 36 at one time, all circling around over the town.

Shortly after we left Dakar I saw another gull like that seen before breakfast this morning, and also some 15 or more terns.

During the whole of the afternoon; too, after we left Dakar, petrels were very numerous. I have noticed recently that many of the petrels are molting their wing quills, and this, together with the length of their legs, makes me think that they are probably Oceanites rather than Procellaria.

From about 3 o'clock this afternoon until dark shearwaters, like those seen at Teneriffe were very numerous, as many as 18 or 20 being sometimes in sight at once.

At about 2.45 P.M.

I saw a jaeger (*Stercorarius*) following the Leopoldville. It was in full plumage, with dark cap, light cheeks and breast, and I think it had the middle tail feathers somewhat elongated, tho I could not be sure. Later in the afternoon I saw two more of these jaegers together. One was an adult, the other was in a darker plumage, with grayish breast.

While we were in Dakar today, the natives brought live green parrots on board to sell, and one also had some birdskins. Of these, several were rollers,

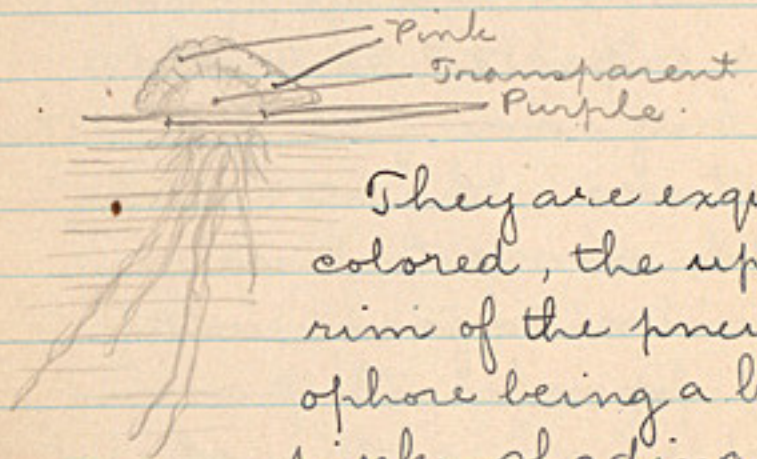
(Coracias), several were starlings with resplendent green plumage, and one was a green paroquet.

We did not go ashore, but expected to be able to buy some fish from the natives, who, we were told, almost always came alongside with fish for sale. But as no fishermen appeared, we could not get any.

Late this afternoon there was another swallow flying about the ship. This time it was a *Himundo*, very much like *H. erythrogaster*, as far as I could see.

I think I must have

seen 150 or 200 Portuguese
men of War (Physalia)
this afternoon, on one
side of the ship..



They are exquisitely
colored, the upper
rim of the pneumat-
ophore being a bright
pink, shading into
purple on the lower side.
The pneumatophore is
very flat, and sticks
up out of the water like
a sail, so that the
animal is carried
along by the wind. We
tried to catch some of
these animals in a

basket on the end of a rope, but did not succeed.

This morning, when I went out on deck I found two negroes engaged in stuffing a flying fish which came aboard last night.

This evening a few phosphorescent animals could be seen in the water alongside the ship, but not so many, I think, as last night.

June 13, 1909 (Sunday.)

Weather: fair, sea calm.

Position of the "Leopoldville".

at noon, Long. $16^{\circ}14''$ W.

Lat. $10^{\circ}20''$ N.

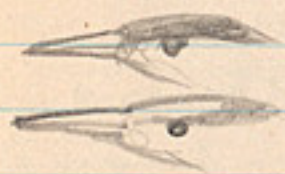
We were followed all day by petrels (*Oceanites*?).

This morning I saw a few flying fish, and a number of Portuguese men of war (*Physalia*).

As a rule, flying fish just sail as far as they can, without any movement, and then drop into the water again; but I have seen some which, when they began to touch the water after a flight, would keep up a little longer by

striking the water with their tails, and thus pushing themselves forward.

This morning I saw 2 terns about the size of Caspian terns, and at 1 o'clock there were about 10 of them following behind the steamer.



Some of them had the whole crown black, while others had a dark patch only on the back and sides of the crown. Their bills were ^{large &} reddish, and their tails rather short, but forked. I heard one make a loud rasping noise.

This morning I saw
one booby (*Sula leucogaster*?),
and this afternoon seven,
six of which were in one
flock.



In the afternoon a
tropic bird - *P. aethereus*,^(OK)
I think it was — hovered
about the ship. Its bill was
a brilliant red, and the
two elongated tail-feathers,
which trailed out far
behind the bird as it flew,
were apparently pure
white. There was an elong.



ate black patch on the
primaries. (= red-billed tropic
bird, Phaeton aethereus).

June 14, 1909 (Monday)

Weather; fair. Reached
Freetown, Sierra Leone, at
6. Am; left about 11.15 Am.
Position of the "Leefoldville"
at noon, Long. $13^{\circ} 19' W.$
Lat. $8^{\circ} 30' N.$

As we approached the
anchorage at Freetown, I
saw a number of ^{small} terns,

Demigretta gularis and a heron, of medium size, perhaps as large as *Florida caerulea*, dark slate color all over, with the face bluish, legs dark blue or black, and feet yellowish green.

We were on shore from about 7 to 10 am. First we visited the fish market, but found only two kinds of fresh fish on sale there. One of these was a small skate, and the other, of which we purchased two specimens, was a medium sized *Teleostome*, white on the belly, silvery on the sides, and dark gray on the back, with a silvery iris.

Afterwards we walked about the town a little.

Everywhere there were vultures (*Neophron* sp), sitting on the housetops, or on dead trees, or even in coconut palms.

The bare skin on their faces was pink, and the plumage brown, lightest on the back of the neck. We also saw two shrikes, together, one of them black and white, the other brownish with fine black bands on the breast. Both had very long tails. Two small greenish kingfishers (*Halcyon* ^{*senegalensis*}), with part of the bill, at least, red. At least two species of weaver birds, one black and white, the other, of which we saw a pair,

brown, with a red head and
^(Lagomasticta)
rump. Some swifts, blackish,
with forked tails, about the size of *Chaetura*,
^{religiosa} We caught a few small
ants, a green grasshopper,
and some small blue-gray
butterflies that were very
common there. I also saw
2 or 3 ^{species of} larger butterflies,
almost certainly *Papilio*,
but could not secure any.

We bought some mangoes
and a "coeur de boeuf".

The former are about
the size of a Bartlett pear,
with ^{a smooth} yellow or orange
skin, and a large pit,
containing a white kernel,
with a bitter taste.

The edible portion, lying
between the pit and the
skin is a soft yellow

layer, full of fibers to stick between one's teeth, and with an odor like that of turpentine, but nevertheless an agreeable taste. (sour soap)

The "coeur de boeuf" is a large green fruit, of an oval shape - some eight inches long - with soft green spines all over its surface. The interior consists of a sweet juicy white pulp, containing large dark seeds.

Both the mango and the "coeur de boeuf" we saw growing in the village, as well as some bananas, and many cocoanuts.

On board the ship, at lunch, we ate still another fruit, "l'avocat", about the size of a small muskmelon, smooth and green on the outside, but yellow inside. When served to us, they contained no seeds, but I suspect that the interior contains a large pit.

The yellow interior, at any rate, is edible, and about the consistency of cheese, but has no particular flavor at all.

While we were in Freetown, we saw many chickens, some muscovy Ducks, and about 10 turkeys.

All afternoon, after

leaving Freetown, the
Leopoldville was followed
by some 6 or 8 petrels
(Oceanites?)

June 15, 1909. (Tuesday.)

Rained all day. No birds
seen, only some porpoises.

June 16, 1909. (Wednesday)
Weather fair, Position of the
"Leopoldville" at noon, Long.
 $6^{\circ}39''$ W. Lat. $4^{\circ}16''$ N. Passed
Cape Palmas at about 9. am.

No birds seen; only a few
flying fish and a very large
school of porpoises.

June 17, 1909. (Thursday)
^{1-31 W} Weather, cloudy, rain in
afternoon. No birds seen.
Position of the "Leopoldville"
at noon, Long $1^{\circ}31''$ W. Lat.
 $3^{\circ}34''$ N.

At dusk this evening
I saw a flying fish fly
right across the rear of the
ship. There was a strong

wind blowing, and the fish canse with the wind, striking a cable when about three fourths of the way across, and falling over the side into the sea again.

June 18. 1909. (Friday)

Weather. partly cloudy all day. Position of the "Leopoldville" at noon, Long $2^{\circ} 6''$ E. Lat $1^{\circ} 21' 30''$ N.

Only a few flying fish, and no birds, seen today.

June 19, 1909. (Saturday.)

Weather fair. Position of the "Leopoldville" at noon, Long $5^{\circ} 31''$ E. Lat $0^{\circ} 24''$ S.

No birds seen today.

June 20, 1909. (Sunday.)

Weather, generally fair, the air rather hazy. Came in sight of the coast late this morning, and followed along it the rest of the day. Position of the "Leopoldville" at noon, Long. $9^{\circ} 25''$ E. Lat. $2^{\circ} 24''$ S.

This morning we saw 3 or 4 gannets (*Sula capensis*?) and this afternoon they were very numerous, and could be seen diving

continually, from the air. They would fly around about 25 feet over the water, and suddenly close their wings half way, stretch their necks out straight, and drop into the water like stones, with simply a little splash. After a few seconds they would reappear on the surface of the water, and sit there, probably eating the prey they had secured.

There were birds in three different plumages; immature birds in first winter plumage, very similar to the young of

S. bassana; fully adult birds, exactly like *S. bassana* except for the blackish tail, and with the same buffy color about the head and the same grayish beak; and lastly, birds intermediate between the two above-mentioned plumages. These may have been birds of the second year, at any rate, their heads were usually of a dirty white color, and the back and wings dark brown.

The fully adult birds were greatly outnumbered by the immature individuals. Shortly after sunset we passed several flocks of

these gannets sitting in the water, where they perhaps intended to spend the night. The largest of these contained 76 birds.

At 5.30 P.m. three petrels (*Oceanites*?) were following in our wake.

At about the same time I saw a flock of 7 terns, like immature black terns (*Hydrochelidon*) flying shoreward; and a few minutes later, a flock of some 20 terns was seen hovering over a spot where the water was agitated by a school of fish. There were some

of the same sort of terns
that I had just seen,
and also some adult
terns of the genus *Sterna*,
about the size of *S. hirundo*.

Three or four whales
were seen from the ship
this afternoon, but un-
fortunately I was
down visiting the
engine room, and
did not see them.

At about 8³⁰ this
evening, a steward brought
us a Wilson's petrel (*Ocean-
ites oceanicus*) which had
flown on board the ship

June 21, 1909. (Monday.)

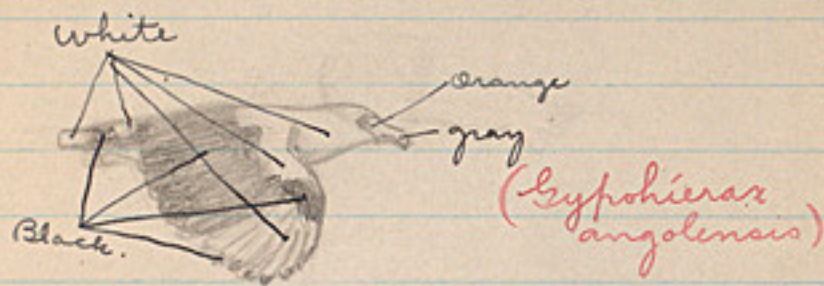
Weather fair. Arrived off Loango, French Congo, about 7.30 am. Cast anchor inside Banana Point about 5.30 P.M. Position of the "Leopoldville" at noon, Long $11^{\circ} 53''$ E. Lat $5^{\circ} 10''$ S.

We saw several gannets (*Sula capensis*) today. There were about three just off Banana.

This morning Mr Lang took some pictures of the petrel that was caught on board last night. I was surprised to see that it did not stand up straight on its legs at all, but usually rested on the whole length of the meta.



tarsus. On walking, however, the hells had of course to be raised a little. This bird's iris was dark brown, its bill wholly black, and its feet black, with large yellow patches on the webs. In the afternoon I made a skin of it. It was a female (♀) with a very transparent and undeveloped ovary. The stomach contained only a few small hard objects like cinders.



At Banana, this afternoon we saw several large birds of prey - about the size of Pandion - colored as shown in the above sketch. The bare skin of the face makes me think they were some kind of vulture.

I also saw some terns, some large, others quite small, ^(S. balabuanum) and a very large number of swifts ^{Tachornis faryus.} ~~(Cypselurus)~~.

At Roango, in the morning, there was a large coelenterate - perhaps 10 or 12 inches long - swimming

beside
it was
in color,
gessed



the ship.
light brown
and pro-
by con-

tracting the rim of the

This evening I caught a
number of moths, a butterfly,
and a few other insects that
came on board the steamer,
attracted by the lights.

June 22, 1909. (Tuesday.)

We left Banana about 7³⁰ this morning, and reached Boma a little before 2 in the afternoon.

Just off Banana point a school of about a dozen large porpoises were disporting themselves.

As we came up the river I saw several of the large white and black birds of prey, ^(*Euphonia*) mentioned in yesterday's notes, some unidentified swallows and terns, two large brown kites (*Milvus* ^{*aegyptius*} sp.) one small kite, ^(*Elanus*) with white head and breast, and iridescent black wings, sitting in the top of a

baobab tree, raising and lowering its tail continually. I saw a large gray heron, with brownish neck, and several white cattle-herons (*Butorides*) were seen by Mr Lang.

Along part of the river bank was a sandy bluff, containing numbers of small holes like bank swallows' nests; and I saw a number of swallows from the ship, but could not tell that any of them were bank swallows. maybe *merops nigriventris*?

In the afternoon, however at Boma, I saw some swallows that were exactly like *Riparia riparia* in color, flight, and size. *Riparia congica*?

Under the veranda roof
at the American Consulate ^(Mr Handley, Consul General)
there were three swallow's
nests, made of pellets of
clay, with a tube shaped
entrance at the side.

In another part of the
building I saw some
more of these nests that
had fallen down, and
found that they were
lined with grass and
a few feathers. The owners
of the nests were perhaps
members of the genus *Hirundo*.
~~H. h. h. h.~~ They had long forked tails
which were of a metallic
blue color. The upper back
and wings were of the
same color, but the head
and rump were chestnut.

The underparts were white, with numerous dark streaks.

(Mr. Kirk)
The vice-consul showed me a few "white ant" nests, and we caught also a number of true ants.

In the evening, in the grass along the shore I heard a number of animals making a peculiar noise that reminded me of cow-bells. They were probably tree-frogs. Later in the evening a sound almost exactly like the song of Fowler's toad was heard in the same place.

June 23, 1909. (Wednesday.)

Weather, fair. Were in Boma all day. Visited the Governor General at 9 a.m.

We walked about Boma today, saw some of the same birds as yesterday, and also a few new ones. In the afternoon, out toward the back of the town, there were 4 or 5 large swallows (Hirundo senegalensis) in the top of a tree. They were a little smaller than the purple martin, and had metallic blue backs, long forked tails, white

throats and chestnut
breasts. [Saw one carry excrement
of young birds out of nest. (doubtful)]
I also saw a medium-

sized black and white
kingfisher, a *Ceryle* ^{*C. rudis*}, I guess.

In the afternoon we
walked over to the British
Consulate, situated a little
way up the river from
the town. On the way
we saw two columns of
"army ants" crossing the
path. These columns were
about 1 or 1½ inches in
width, and the middle
was composed of small
individuals hurrying
along, bearing white objects
which proved to be their
pupae. On both sides were
closely packed walls of ants

not moving, but evidently intended to protect the center. There were also some very large individuals, with immense jaws. We collected a number, and put them in a small bottle of alcohol, by themselves.

A negro brought a small live snake, in a beer bottle, on board today, and we bought it from him. (No 1.) It was black on the back, dark gray on the belly, but near the neck had light gray bars on the sides. (A rare species, see Schmidt's report.)

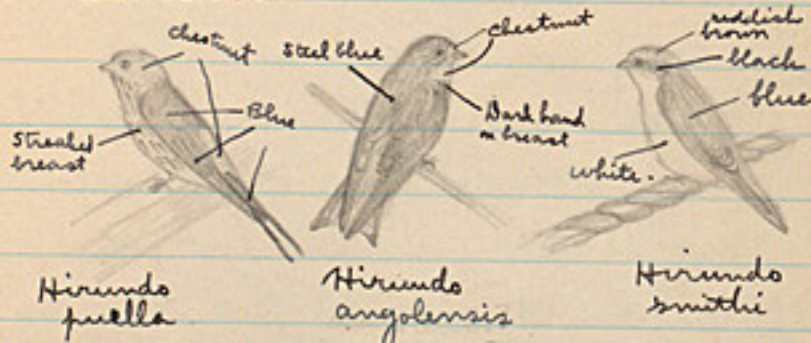
June 24, 1909. (Thursday)

The "Leopoldville" left Boma about 6 am, reached Noqui (in Angola) about 8:15 am. On the way up the river I saw about 25 of the black and white vultures which are so common along the lower Congo.

At Noqui Mr Lang and I went ashore (9:30 am to 12:30 pm). There were at least four kinds of swallows flying around there. First, there were many bank swallows, *Riparia ~~conica~~ congica*. Next there were some of the same swallows with streaked breasts, chestnut head & rump, and blue back, wings, and tail that we saw in Boma.

Thirdly, we saw about three swallows like *Hirundo erythrogaster*, but with the tail almost square, and with the white patches on the rectrices very large.

Lastly there were a number of swallows with metallic blue backs, white bellies and throats, but chestnut crowns.



The commonest bird in Noqui was a little weaver bird, gray, with a blue face, breast, sides and tail. These little birds were exceedingly abundant

and very tame. Two or three of them were sitting around some nests of grass in a thorn tree. [~~Harporhynchus~~ *angolensis*]

At Noqui we also saw two black and white kingfishers (*Ceryle* ^{*melas*}) together, and a large brown hite (*Milvulus* ^{*parvulus*})

There were three species of lizards to be seen, one small, striped, and brown, very common; another medium-sized gray, mottled, saw 3 or 4; and a third, of which we saw only one individual, with a brown head, blackish body, and the tail brown near the base, but dark gray towards the tip



We caught two of the small striped sort.

This evening at Matadi I heard the same bell-like noise in the grass near the shore that I noticed at Boma.

Ant. lion holes were very numerous in sandy places in the roads at Noqui and Boma. We caught several at Noqui.

June 25, 1909. (Friday)

Weather: fair. We walked around Matadi a little today, and caught a few insects.

One of the most interesting things I saw today was a flock of five colies (Colinus ^{nigricollis} ~~+~~) in a bush in Matadi. The positions they assumed as they climbed about

were extremely peculiar. Sometimes they would hang down from a horizontal branch, again they would



sit up-right on it, and more rarely they would walk right up a small

perpendicular branch, propping themselves up with their long wedge-shaped tails.

* The accompanying sketch was made while I watched them. Their

feet were brilliant red, the beak grayish, the face black, with a gray patch just behind. The wings, tail, and most of the body plumage were ~~grayish~~ brown, lightest underneath; but the feathers of the crest were buffy white. I could not see any color in the eye, so the iris was probably dark brown.

Two of the birds had longer and more richly colored tails than their companions. This may have been a sexual difference, or they may have been the parents

of the other three.

I tried to see how they held their toes, but was unsuccessful except that I saw once that one sat with two toes in front and two behind, but the outer toe sticking somewhat sidewise, instead of straight behind.

They made a scolding note, "ch-ch-ch--", and ~~also a complaining sound like "mah"~~. The flight was quite direct, but slightly undulating.

The other birds seen today were one black & white kingfisher (Ceryle?), some swallows with streaked breasts, about four

swifts (^{Tachornis}~~Cypselus~~), several
kinds of small weaver birds,
one dull-colored sun-bird,
and a few others which I
could not tell anything about

I saw but one lizard today.
It was sitting on a branch
up in a bush, and was
one of the middle sized
gray sort that we saw
yesterday at Noqui.

In the bush where I
saw the colies, there was
a peculiar cocoon hanging
by one end to a horizontal
twig some four feet from
the ground. A picture of it
is shown on the next page.
I brought it back to the
ship, laid it down, and
was very much surprised,

(Psychidae)



when I picked it up again ^{to see} that there was an opening near the point of its attachment to the twig, and that it closed when I picked it up.

Later the caterpillar detached its cocoon from the twig and walked off with it.

Both the cocoon and caterpillar were preserved.

Late this afternoon, near the dock at Matadi I found a place where there were many curious long slender grasshoppers in the grass. There were both green and brown ones, and

most of them were immature,
but I succeeded in finding



adult specimens of both colors.
The usefulness of their
peculiar shape was, of
course, to render them less
conspicuous in the grass.

June 26, 1909. (Saturday)

Weather; sunny and hot,
as usual. Spent a part of
the afternoon on shore, in
Matadi.

There were 2 kingfishers
(Ceryle?)
and a
kite (Milvus)
around the
ship today.



On shore I saw a number
of little weaver birds, 3 sun-
birds, 4 or 5 colies (perhaps
the same ones as yesterday)
and the same 3 kinds of
lizards that we saw in
Noqui.

Mr Lang found a small
brook where there were a
number of frogs, but they

were far too shy for me to catch.

June 27, 1909. (Sunday).

Weather, fair & warm.

Spent the latter part of the morning on shore.

I saw a dead snake in the street in Matadi, the same kind we bought in Boma, June 23rd, but considerably larger.

On the hill behind Matadi we found about 15 "very curious" white ant "nests", shaped exactly like

gigantic mushrooms,
from 8 inches to a foot high.
They were made of gray
clay, were very hard, and
were full of little chambers,
connected by small round
passages thru which a
single termite could just
crawl. Inside one of the
nests we broke open we
found 3 or 4 small cocoons,
perhaps of some commensal
insect.

Many of these termite
nests had stalks
of grass sticking
up thru them,
one very large one
was built against
a bush, and
another was constructed



this funnel is the entrance
to the nest of *Adymus* *argyrops* *Grubbs*
see wrap page 13

on the side of a stone.

The very large nest mentioned as being built against a



bush had a peculiar structure, like a small inverted funnel, on

one side. It was also made of clay, and may have served as some sort of entrance.

A number of the inhabitants of one nest were preserved.

Near the place where these white ant nests were situated we saw a clump of some sort of papilionaceous bushes, in which there were a couple of dozen large beetles hanging to the

flowers. Some of these
beetles, the larger ones,
and probably the females,
were black, with a yellow
spot and two yellow bars
on each wing cover. The
smaller ones had the
marks on the wings
reddish, but one of the
females(?) had them
decidedly orange. These
insects flew readily,
and made a loud buzzing
noise while in the air.

June 28, 1909. (Monday)

While we were walking along the railroad track in Matadi early this morning, a vulture flew overhead - one of the black & white ones so common on the Congo ^{Syphinaea} and let a fish fall from its claws, which dropt within a few feet of us. The fish was only slightly mutilated, and so we preserved it (No. 16.)

June 30, 1909. (Wednesday)

This morning, at 6.³⁰
we took the train from
Matadi for Leopoldville,
arriving at Thysville
about 5.³⁰ P. M.

The country is very
rough all the way, but
the most precipitous part,
I think, is just a few
kilometers outside of Matadi.
As one gets farther and
farther from Matadi, the
vegetation increases, until
most of the valleys have
patches of forest, but the
tops of the mountains are
always clothed with
high grass and a few
small trees and bushes.

The course of the rail-

road is extraordinarily tortuous, in order to avoid all grades possible, but the track is well laid, and well ballasted with crushed stone. Our train consisted of an engine, a baggage car, a second-class coach, and a first-class coach. We changed engines at Songololo, but before reaching there had stopped five times to take in water, and several other times, in addition, to oil the engine, and so on. Between Songololo and Thyzville we had to stop 7 times more for water. The engineer, fireman and brakemen

were all negroes.

We saw a good many birds - but mostly small ones - as we passed along, many weaver-birds, 2 colies, several kites (Milvus), and four or five of the black and white vultures we saw so many of on the river. We also saw several trees full of bird's nests.

Termite nests were very abundant, the majority of them being of the mushroom shape that we examined at Matadi, June 27. These were usually gray in color, but a few were built of yellowish earth.



I saw a
number with
double roofs,
from the train,

and one which supported an-
other ^{complete}, but smaller nest
on its top. At one of our
numerous stops I had the
opportunity of examining
a nest with a triple roof.

The other kind of termite
nest seen from the train
today was usually made
of yellow clay, and was
much more irregular in
shape. Both kinds of
nests were frequently
seen together.



I also saw some
of the galleries of
mud which white

ants make to, ascend trees and bushes.

On the side of one of the mushroom-shaped nests, just beneath the roof, I found a small gray lizard (gecko) clinging. It was very sluggish, and did not move when I knocked over the nest, but did try to wriggle out of my hand when I picked it up.

July 1, 1909. (Thursday.)

Left Thyville at about 6.⁴⁵ this morning, and arrived in Leopoldville about 2.³⁰ P.M.

The woods are much more extensive on this side of Thyville.

Mushroom-shaped termite nests were to be seen almost all the way, many of them having 3, or even 4. roofs.

At one stop we made, Mr Lang caught a lizard ^(Agama), one of the large brown-headed ones. At another place, I saw a number of toad tadpoles in a little pool. At a third I heard a couple of frogs ^(?) making a

noise just like the song of
Rana palustris.

We stayed overnight at
Lespoldville with Mr. Morgan,
and in the evening caught
a fruit bat that came into
the house (No 1.)

July 2, 1909. (Friday.)

This morning we
went out and shot three
birds, one of them a
colly (No. 2.) of the same
species I saw in Matadi.
It was, to judge by the
size of its testicles, an
adult male, but the skull
was in exactly the condition
of that of a young passerine

bird.

A number of other birds were collected, including a couple of sun-birds and two kinds of pigeons.

July 3, 1909. (Saturday)

We are still staying with Mr. Morgan at Leopoldville. We collected some more birds today.

Just outside our door is the hole of a large iridescent black carpenter bee, and today we caught it, and also secured one of its young from the hole in the wood.

July 4 to 11.

This whole week we stopped in Leopoldville with Mr. Morgan. We collected some birds, insects, and a few mammals and reptiles, mainly on the west side of the town, near the shore of Stanley Pool. On Tuesday (July 6) we walked over to Kinshasa and back.

Friday evening we caught a large toad on Mr. Morgan's back steps, and every night a chorus of some sort of batrachians, probably the same toad, could be heard in a swamp just across the railroad track.

Around Leopoldville

we saw, and collected
two or three species of lizards,
the brown-headed and
gray kinds that we saw
in matadi, and also
a long, slim brown-backed
species, with yellow lines,
that would run down
into holes in the ground.
We saw not a single
snake, tho Mr Horvell,
of Kinshasa spoke of
"boa constrictors" (pythons?)
and the spitting snake,
as being found there.
His wife, we were told, had
had the poison of the latter
serpent thrown into her
eye, and according to
Mr Horvell, this fluid would
burn like acid when it

touched the skin.

The country near Leopoldville is remarkable for the scarcity of large birds. The largest birds we secured were pigeons.

There was a small brownish (Chalcophaps indica) dove, very common, and found even on the mission grounds. We secured two specimens an adult female, and a young female. Pigeons were not uncommon, and we secured two specimens.

There was said to be a "pigeon vert" - fruit pigeon - Vinago calva I suppose - but we did not see it.

Birds of prey were surprisingly scarce, the only one we saw being a kite (Milvus).

single individuals of which visited the mission grounds two or three times, evidently in search of chickens(?)

Two kinds of kingfishers were observed, the black-and-white *Ceryle* seen on the lower river, and a small Halcyon. Bee-eaters were not uncommon, and two examples were taken. There were at least two kinds of swifts, a medium-sized *Tachycineta* ~~Cypselus~~ with a long, deeply forked tail, and a larger swift, with a short stubby tail, and apparently a white rump. ^{*Chaetura*} The former was much the commoner of the two. No woodpeckers were seen. Colies, of the

same species as those seen in Matadi were observed about three times, usually in companies of 4 or 5.

Strangely enough, I saw no crows or magpies at Leopoldville, but there were at least three kinds of shrikes, and we killed one specimen of each.

The only starling I saw was a small white-bellied one, with an iridescent purple head and back, that I shot near Kinshasa on Tuesday. (*Cinnyricinclus l. verreauxi*)

Of weavers there were a number of species, several of which we secured. One rather large black one,

Melanopteryx nigerimus
with yellow eyes, ^ was
observed to eat the outer
coat of the palm nuts,
which it sometimes
dropped from the trees to
the ground. There was
a small brown species,
that often fed, in large
flocks, in the grass or on
the ground. Some had
black heads, and one of
these we killed and found
to be an adult male, but
out of seven immature
birds collected, those
which had the greatest
number of new dark feathers
about the head were females.
The day we went out to
Kinshasa we saw a
couple of large flocks of

a kind of large weaver-bird, most of them in a streaky brown plumage, but two or three of them with long ^{colius passer} ~~colius~~ ^{macroura} tails. The brown individuals as they perched on the long stalks of grass, bore the strongest sort of resemblance to bobolinks in the winter plumage.

We saw at least 3 kinds of sunbirds, and secured adult males of two. The commonest was the one with the bright red breast. Its song was a warble somewhat like that of the American Goldfinch.

There were a good many bank swallows near the

shore at Leopoldville, but
saw no nests.

The small black and
white flycatcher (Nos. 12 & 13)
was rather common,
and had a loud song
consisting of three clear
whistled notes. The large
brown, crested flycatcher
(*Bias musicus*)
I shot was the only one
seen.

One of the very commonest
birds was a bulbul, (*Pychostrus tricolor*), with
a dark brown back,
slightly crested head and
yellow under tail-coverts.
We took but two specimens.

A couple of flocks of gray
parrots were seen at Leopold-
ville, but they are said
not to breed there.

Of the mammals, the hippopotamus was undoubtedly the most interesting. Along the shore beyond the mission there were at least three, which could often be heard grunting loudly. Mr. Lang saw one alive, and on Saturday (July 10), at the state beach, I saw the head and limbs of a dead hippo, that had probably been killed in the vicinity, some time previous - to judge from the odor.

I saw two squirrels, in thick brush, and some natives brought us one alive. It had

very short ears, and was striped like a chipmunk, but had a bushy tail. Mr Morgan had one of the same kind in a cage.

There were a great many rats about the houses, much like *M. norvegicus*, but with larger ears, I think. We saved a half dozen or more skins.

Of bats we got three, representing three species. The first was a fruit bat, already mentioned. The second was a small brown bat that a chicken was carrying in her beak. The third was a brown bat, of medium size, with very broad

ears, and a very queer bare space around the nose. It flew into the house in the evening.

On the morning of July 4 a crocodile was seen near the shore, and a boy on the S. S. Livingstone fired at it, but missed.

Just behind Mr. Morgan's house, there was a fan-palm^(Borassus), under the leaves of which both paper- and mud-wasps built their nests. A diagram of a nest of the latter is given on the next page. In the cell marked "adult", an old wasp sat, with a white larva behind it. Frequently another adult, with much larger



mandibles (?)
than the
first one,
was to be
seen sitting
on the out-
side of the
nest, but
I could
not catch
it.

A common
form of termite nest at
Leopoldville was a mass
of dark clay, honeycombed
by galleries, and set up
in a crotch of a tree,
frequently a mango. The
tree itself also bore many
covered passages built by

the termites. Mr Lang took a photograph of such a nest, and I collected some of the "ants".

A few mushroom-shaped termite nests were seen out toward Kinshasa.

On Sunday (July 11) I found, near the shore, a large tree about the base of which was a clay structure like a termite nest; but when I pulled off some pieces of it, I found only a number of large millipedes rolled up in holes inside what was evidently an old deserted nest of "white ants."

Ant lions were very abundant at Leopoldville, wherever the ground was

soft enough to allow them
to excavate their conical
pitfalls. In one place I
counted seven in a place
not a foot square.

July 12. 1909. (Monday)

We sailed from Leopoldville at 7.30 am on the barge^{1 b/s} for Stanleyville.
 Passed steamed with Prince Albert in Stanley Pool.
 We touched at Kinshasa, and stopped for the night at Maluku. a wood station on the left bank of the river a little above Stanley Pool.

Just after leaving Leopoldville, I saw two birds very like the black skimmer, with the same coloring on the back and head, and with red bills. Unfortunately I could not see the shape of the bill, but after seeing two or three more sitting on a sand bar late in the

afternoon. I was pretty certain they were skimmers (yes - *Rhyacops flavirostris*)

At Kinshasa there was an immense flock of bank swallows ^{*Riparia capensis*, perhaps.} some 8 or ten of the streak-breasted swallows ^{puella.} (*Hirundo*) seen nesting at Boma, a couple of *Hirundos* very like *H. rustica* ^(= *H. angolensis*), and a pair of another species (~~perhaps a~~ *Hirundo* ^{*nigrita*}) metallic blue all over, with the exception of a small whitish spot on the throat and white patches on the tail feathers. The tail was short, and very slightly or perhaps not at all forked. These two were the first of this sort I had seen.

There we also saw a

black & white Ceryle, and three rather large black & white wagtails.

During the day, on the islands in Stanley Pool we saw two ibises ~~very much like~~ I. sacra, with bare black heads & necks, white plumage and black wing tips, about six pelicans, a fish hawk (Pandion) standing on the sand, a jacana (🐾), and a number of unidentified birds. There were a few kites^(milvines), which sometimes lit on the sand, a few shore birds, and some large storks^{Leptoptilus, I believe.} (?) which circled around high in the air.

July 13. 1909. (Tuesday)

I went ashore this morning at Maluku, from 6 o'clock to 6.45.

There were 6 or 8 rollers (Eurystomus^{afers}) flying about over the forest and alighting on dead branches in the tops of the high trees. While perching they sometimes uttered a hoarse cry that made one think of a parrot. I killed one.

Two gray parrots were also seen, but there were few small birds in evidence.

July 13 to 16

Going up the river; we stopped on the evening of the 13th along the shore a little above Lisha; on the 14th at Kwamouth, at the mouth of the Kasai; on the 15th along the shore; on the 16th at Ajumbi.

On the 13th I saw an eagle (Haliaeetus vocifer) sitting in a tree on the river bank. A few snake-birds and black-and-white vultures were seen every day. Kites (Milvus) were also noticed, but were not very common. Pigeons were very often seen, both on the sand, and in the trees. Black-and-white

kingfishers (*Ceryle*) were numerous. A plantain ^{(*Musophaga violacea*?) ???} eater, with a horny protuberance on the forehead, dark blue plumage, and red patches on its wings was seen on the 13th from the steamer. On the 15th and 16th, we saw many bee-eaters ^{*Merops malimbicus*} with bright red breasts and bellies, and some crows with a white

Corvus
albus



patch on the breast that also extended around the back of the neck. These crows have a hoarse "caw".

Along the bank we frequently saw some sort

Xiphidiopterus albiceps
of a large lapwing, and at
Kwanmouth, Mr. ^{Vand} Kerchove,
a fellow-passenger, killed
a Pternistis and
a stone curlew. Oedicnemus
vermiculatus

Late in the afternoon
of the 15th, I shot a monkey
that was sitting motion-
less in a tree, some 35
feet up, in a ^{wooded} swampy
place along the shore,
where the steamer stopped
overnight. Alouatta
nigronoides

At Tshumbiri, the
same day, a young
striped rat (No. 15) was
sent aboard to us from
the mission.

At Yumbi, in the
early evening I saw
five or six large goat-
suckers (~~perhaps~~)

Scotornis climacurus) flying
around just over the bushes,
and killed one, a male,
which had the remains of
a few beetles in its stomach.
At the same place, as well
as one or two places further
down the river, I heard the
same ^{tree-}frogs(?) with the bell-
like song, that was noticed
at Boma and Matadi.

July 17, 1909. (Saturday).

This morning I saw
a hippo's head stick up
out of the water while we
were passing a low,
grassy part of the shore.
We also saw a crocodile,
sitting on a sand bar,
with its mouth wide open.
Mr Lang fired at it, but

long before we were out of sight it was up on the sand again.

We stopped tonight at the Telegraphic post 34, where I saw ^{3 or 4} hornbills, ^{feathers gray white} and shot 4 kingfishers, representing 3 distinct species.

^{whitetails to all rectrices} The European in charge here was a Mr. E. Antoinet, who had the ^{plumage} variety of wild stories on tap, but redeemed himself by presenting us with the skins of a Crocodile Bird and a Skimmer.

Rhynchops

2 +

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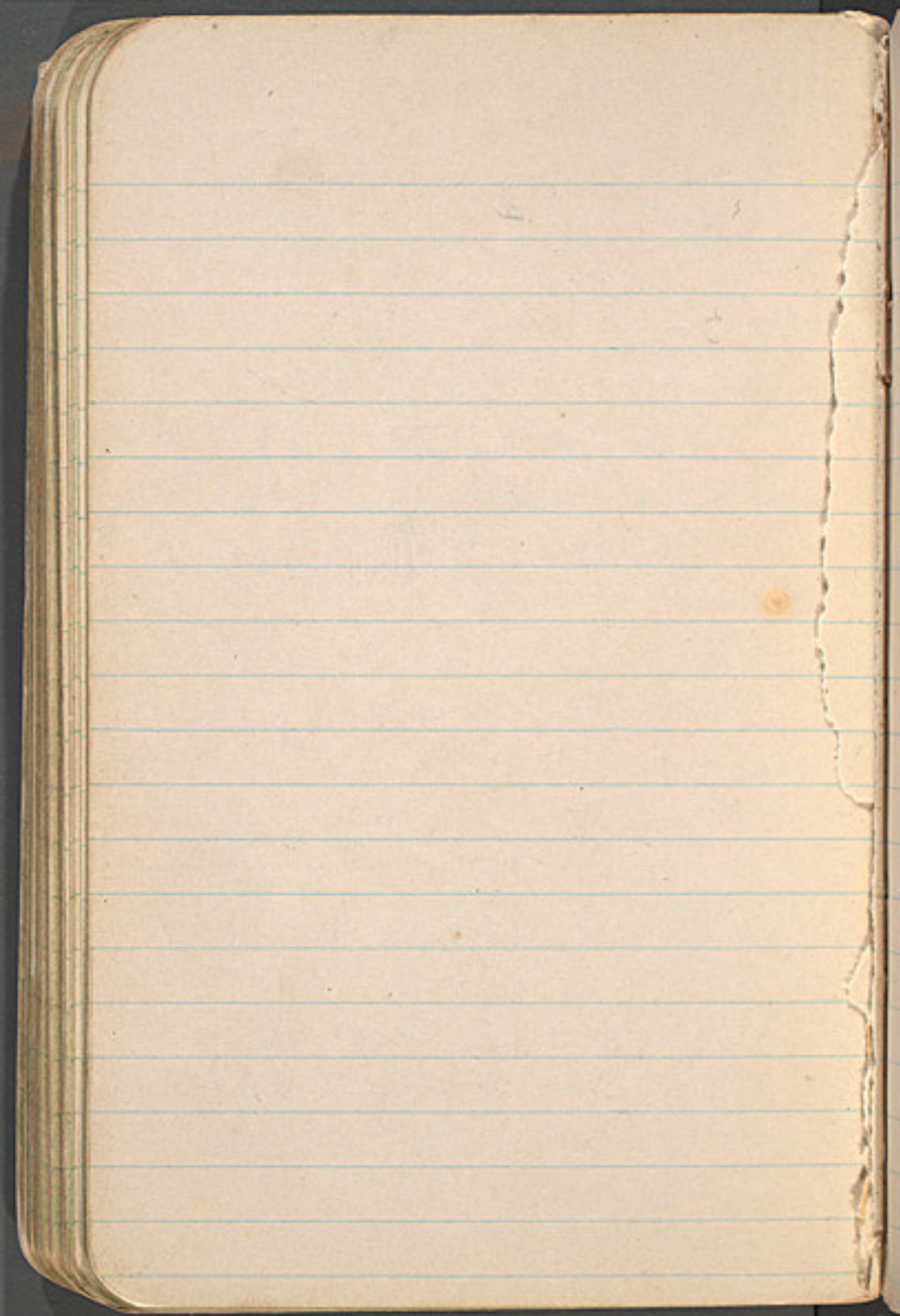
top

hill

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Bouwnaatschappig
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For the American Gentlemen
who are collecting rats, &c.
with Mr. Billington's
Compliments.

If some dead rats reach the skinner
they are to show the kind found here up to
16 inches, nose to tip of tail

