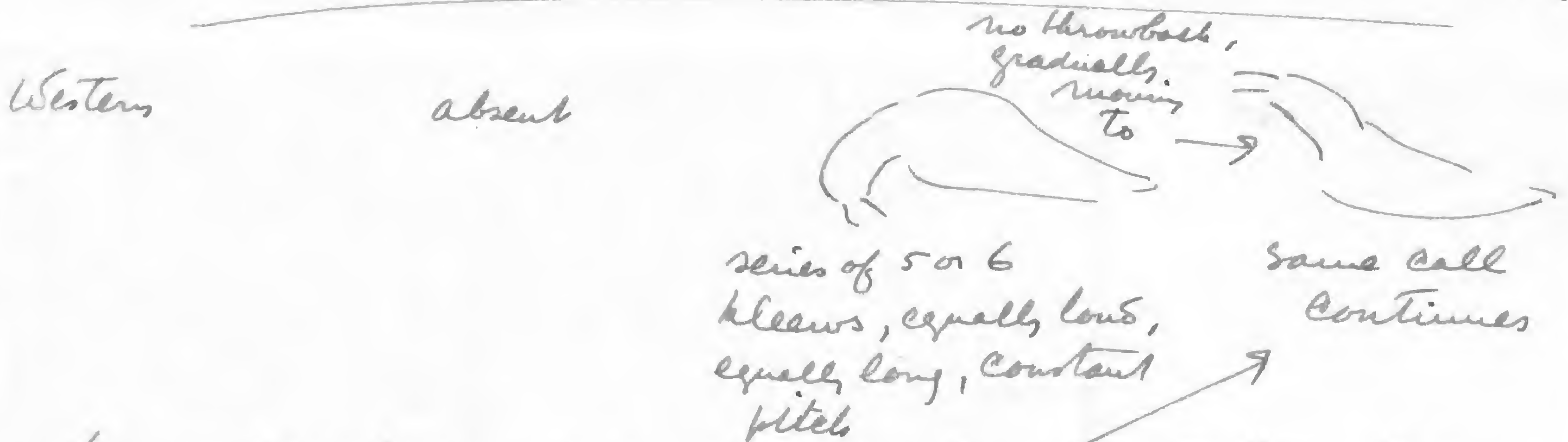
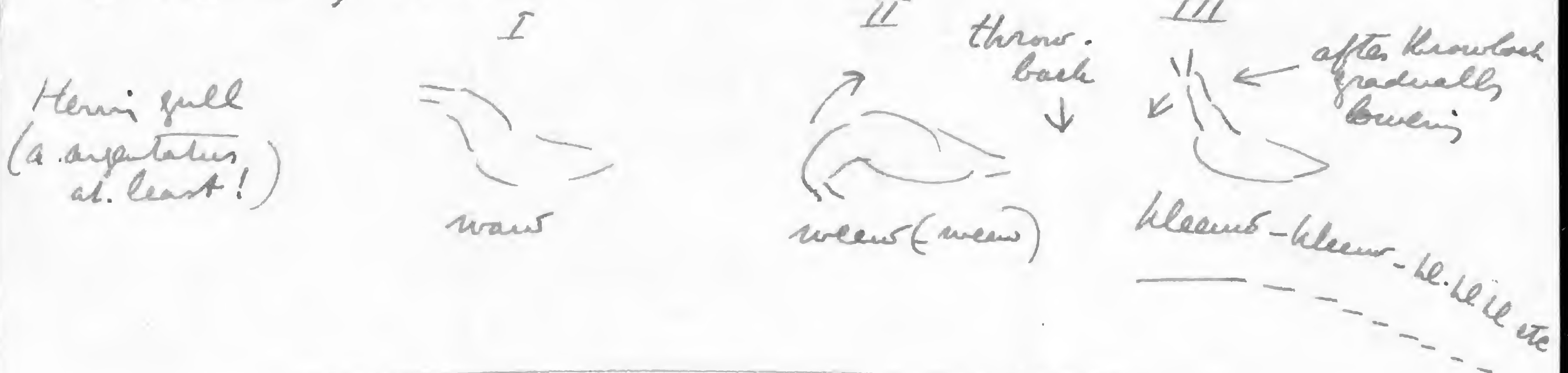


Pacific Grove
July 26 1956

I kept your report for a while, assuming that you would not need it as long as you were in the field. Thanks a lot.

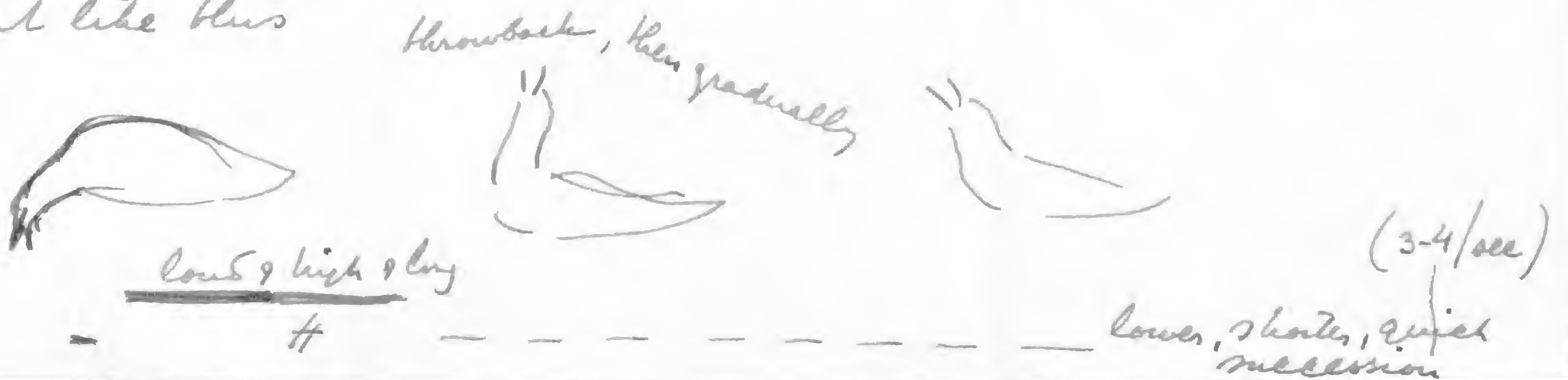
In the meantime I have seen something of the Western Gull and a little of Heermann's. Western is in everything a replica of our Herring Gull, except in the long call.



(in mild clashes: call starts in oblique and stays there; after the head comes down a little while the series of calls is given)

Of Heermann's about like this

I saw only the long calls, they are



I further spent some time watching the "staring down".
It has to do (autoethnologically) with feet-cleaning: a
bird which has something irritating on a foot (lifts it
often, shaking it violently again and again, pecking at it) dis
stare down all the time in between. But after mild
hostile clashes it comes, regularly, as a clock; ~~then~~
a second or so after the clash is over. I am convinced
that Goethe is right in this latter point.

I could not do much more gull - watching.
Am looking forward to your final reports.

All the best
Yrs ever

Niko Tinbergen

Seattle, 5, 1956
Dept. of Zoology

Dear Martin,

Thanks for your letter of May 12. You sure saw something of gull behavior! Tell me: do you want your report back, or shall I send it on to Mike and Esther?

You must by now get a fairly good idea about the taxonomic relationships in the group. One thing seems to me obvious: the large gulls form a very closely knit group, and the ridibundus-type is another one, with ~~pipinean~~ *Bonaparte's*, ridibundus and novae-hollandiae very close together indeed.

It seems to me that w4 are approaching a stage in which one can see "primitive", original forms of display, one in this species, one in another. Thus you say that the alarm call of Belcher's Gull may be primitive. Your criterium is, I believe, that it is less different from the other calls than it is in most species. I got a similar idea as to the trumpeting call in the Glaucous-winged Gull: this is the only thing in which it differs from the Herring Gull; the single calls are all very much alike, and each is more drawn-out, and resembles closely the single keew-call as used for "Stimmfuehlung", just social contact. In the European Herring Gull, there are three phases, one a raw kaw, ~~with~~ in the oblique, then the throw-down or bend, with one or ~~two~~ smothered, high-pitched calls, then the throw-back to the oblique with a series of keews beginning with a loud and high pitched one, and then the rest with diminishing loudness and descending pitch, the head gradually doming forward and down. The Glaucous-winged rarely does phase 1, it does the bend with the first call, then throws the head back slowly, and gives a very equal, level series of just rather long-drawn, no staccato keews. Because each is so similar to the general keew call this gives the impression of being closer to the original form. In all other displays and calls I can't see nor hear any difference. Ecologically the species is more of an open sea fisher than our H.G., it does much more plunge-diving off shore. It has a dark eye, the wing tips are very light, a little darker than the blue mantle, and further the bird is a little stouter than our H.G. But after having seen this I begin to wonder how the various HGs behave. I think a close study of those very closely related species of the HG superspecies may become very interesting indeed.

I quite agree with your ideas about the redirected attack being primary in the grass pulling. I would be careful with the coining of the phrase "pseudo-displacement activities"; it is quite possible that all d.a. are in this sense pseudo, the name d.a. ought, I think to be kept as a provisional, descriptive term, and its causation should be worked out, but as long as we have not done this in more cases, I think the coining of a new term would suggest a dichotomy which need not be there; the term would imply that you know that there are real d.a. as distinct from the pseudo, and that we don't know yet. But it is extremely interesting that the redirected attack which in ridibundus is just that, should develop into either feeding drinking or nest building in Belcher's. In our H.G. it certainly develops only in grass pulling. It is another example of the possibility of finding the origin of a movement by comparative study, and then its radiation. One species may have the primitive form of one movement and another that of the other. Thus I believe that the Kittiwake shows a rather primitive form of choking, in which you can recognise the origin as throwing-down of nest material.



Once one would, in this way, movement by movement, have found the origins, it becomes of great importance to list exactly in what way the movement has changed in the course of radiation, because that will give us ideas as to what can change in speciation, in the way of behavior mechanisms.

And all this seems to me to lead to so many interesting aspects, of evolution, taxonomy, behavior, that it will be a major job to work all this out. Publication of all the descriptive stuff may be difficult, and it may be necessary to keep the full reports as mimeographed reports, and perhaps publish short descriptive accounts in various journals (if you could do this in papers ~~maxxi~~ of a size acceptable to various ornithological journals, you might get them published with at least the drawings in such journals as Wilson Bulletin, Condor, Ardea etc (Ardea might accept a paper on a species that occurs in the West Indies)), and then general conclusions in Behaviour journals.

Another point: what do you think of wing tip patterns? I got the idea that they must be rather adaptive, inclusive perhaps mantle-color and color of under wing. It struck me that Hartlaub's gull has got the white front bar on the upper side of the wing just as ridibundus and Bonaparte's, but that Hartlaub's has developed a rather canus-like wing tip pattern. Now it may be significant that at least in South Africa there is no other species that has the argentatus or canus-type; it is as if, for species-recognition, the species in each general region diverge. Usually, when the field ornithologist uses such a thing as a field character for diagnosis, (as in the wing and tail patterns of waders), it seems as if the birds themselves use it too. If so, Dwight would have taken a rather awkward character to base his classification on. But I can't see any practicable way of deciding whether these things are social signals or not, except perhaps: a. zoo observations in which species from all over the world would respond to flying species with similar wing patterns (as with the Geese in the Berlin Zoo), b. statistics about the wing patterns of species within one geographical area.

With all these things, I may be ^k"talking wet", just knowing so much less than you do. I wish we could have another gull conference with you attending and showing your stuff. Whenever you would come to Europe, you need only tell us and we would all converge on whatever roost you would choose to alight!

I guess you are well informed about new developments in Oxford? Desmond got a job in the London Zoo, Aubrey a lectureship in Edinburgh, Uli same in Birkbeck college, Fae a fellowship in California, David Blest a lectureship in University College. That looks like spreading the gospel indeed.

Our stay here is very pleasant and stimulating. I feel quite at home as usual, and there is a lot to see in the surroundings. We are extremely lucky with the weather, and marvel at the Cascades, the Olympics, the bird islands in the sound, and the giant volcanoes. Just last weekend I slept in a large glaucous-winged colony and could start watching from my tent at daybreak; saw all the displays many times, and could even take some pictures.

All the best, yrs ever

*Philip Quator, a poultry research job
in Edinburgh!*

Niko Tinbergen



Bonaparte's, June 17, 1955, I.

Watching birds on shore Dog Lake. All, apparently without exception, are first-year birds. Some are in almost complete nuptial plumage, some in complete winter plumage. On the whole inactive; but they do react to my approach, occasionally chase each other or the Common Terns, and squabble over fence posts.

Have noticed the following hostile patterns:

Aerial Long Call Note. The buzziest and twangiest note of all. Long drawn. Could be transcribed as something like "Kaa-aa-aa-ah" or "Kaa-aa-aanh".

Series of Long Call Notes, in the air. Much shorter notes than the single Long Call Notes. Could be transcribed as "Kaaa-kaaa-kaaa-kaaa-kaaa....". Also very buzzy and twangy. Uniform pitch. Done by swiftly flying bird, with beating wings apparently. (Rather different from the complete Long Call on the ground, which has the usual

form, and stretches through the O and F postures).

Alarm Call? Very short, buzzy note, impossible to transcribe, given by flying birds flying over me.

Gakkering. Possibly given by flying bird, certainly by standing bird, during disputes in which one is trying to force the other off its fence post. The standing bird gives it from a posture comme ca:

The sound itself can probably be transcribed as "Kakakakakakakakaka...." with the usual buzzy quality, but in a definitely less extreme degree. Is this the same sound I heard at Buffalo?

Charge Call. Like a single Long Call Note; but not at all polysyllabic, harsher, very little twang, almost a scream. Apparently accompanies the Swoop.

*Getting louder
toward the end, I think
Can be repeated at intervals
during Pursuit flights*

Bonaparte's, June 17, 1955, II.

Circling. Essentially like Ring-bill in physical form. Perhaps somewhat more erratic.

Erratic Flight. Reaction to human disturbance. Just like that of the Black-headed Gull, but even more extreme. May possibly occur in intra-specific encounters; but a little difficult to tell exactly what are the releasing and orientating stimuli in some of the doubtful cases.

Pursuit Flight Performance. I have only seen the Pursuer's patterns. Mostly chasing Common Terns. Have had a glimpse or two of intra-specific chases.

Swoop. With Pursuit Flights. Just like the diagonal Swoops of the Black-headed Gull and Franklin's Gull.

"Flying" Soar. Follows Swoops. Like ordinary Soar; but accomplished by beating wings.

Soar. Possibly occurs during some Pursuit or Erratic Flights; but must be rare (at best) and relatively inconspicuous.

The following incident may be significant:

One bird, disturbed by me, flies up. Into loose flock of Black and Common Terns. Flies round and about, up and down. Occasional Swoops and "Flying" Soars. Occasional sudden, extreme, downward plunges; with wings half-folded, motionless. Followed by flying up again. None of these Swoops or plunges were obviously directed at a particular object or animal; but they may actually have been so in reality. The whole performance was perhaps slightly reminiscent of some Erratic Flights or hawking for insects; but the bird apparently gave Long Call Notes in flight, and "looked" rather aggressive.

Additions, as a result of further observations in the evening. A large flock was assembled, including perhaps 60 birds, and also including a few adults in complete nuptial plumage.

There is definitely a complete Long Call in the air. Sounds just like the complete Long Call on the ground or water. Given by rapidly flying birds, beating their wings very rapidly, (this flight, surprisingly enough, is not particularly buoyant or tern-like --- in fact, I haven't yet seen any tern-like flight under any circumstances in this species). Accompanied by a very marked Oblique Posture, much more marked than anything in Franklin's Gull or anything I remember in the Black-headed Gull. The posture is almost "reminiscent of the Little Gull's aerial Vertical posture. No sign of any aerial Forward posture. (All the observed aerial Long Calls were given by immatures).

An adult bird was heard to give definite Alarm Calls. Obviously

the same call as the one I cited earlier as "Alarm Call ?", but just a little different. Not as buzzy. Sometimes one note, sometimes two, sometimes three. "Keh" or "Keh keh" or "Keh keh keh".

All sorts of Swoops. Interspecific, toward me. Intra-specific, during Pursuit Flights after other gulls. Much as described above. Shallower than those of the Black-headed Gull and (perhaps) those of Franklin's Gull. Very rapid, with very rapidly beating wings. Definitely accompanied by one or two Charge Call Notes. These can be transcribed as "Keeeeeeeeer" or "Kreeeeeeeeee", (not really "Kwarr"), but this gives a very poor impression of them. Buzzy, but definitely scream-like. These notes stop as soon as the bird starts to fly up.

"Flying" Soar is the usual pattern after Swoops. Also relatively shallow.

This Swoop-"Flying" Soar routine, incidentally, is not unlike the behavior of Common Terns in similar situations. But the Swoop-"Flying" Soar of the tern is much steeper and more vertical.

"Typical" Soars also occur. Still relatively rare and inconspicuous. Occur after the most shallow Swoops.

Have seen quite a number of mutual Swoop-"Flying" Soar performances. Like those of the Black-headed Gull; like pendulums crossing.

Erratic Flights, or what I have been calling Erratic Flights, are remarkably common in these species. Whenever, for instance, I put up a flock of birds from the ground, a large proportion of them will start Erratic Flights, while it is only a much smaller proportion of them that will start Pursuit Flights, Swoops, etc. These Erratic Flights are very erratic indeed, with a terrific amount of twisting and turning, flying up and down, vertical plunges (sometimes for huge distances), etc.

They do not appear, very often, to be orientated. It is certainly my impression, however, that they are rather more than "alarm" reactions. I would not be surprised to find that they contained a strong aggressive element.

In general, it is obvious that all flights of this species tend to be more erratic than those of related species. This cannot be ascribed to the small size of the birds, (as Little Gulls and Terns are much less erratic); but it may, conceivably, be due to a combination of small size, plus short wings.

Bonaparte's, June 17, 1955, III.

Almost forgot. Watched adult bird, on post, displaying toward flying birds. Sometimes, when the flying bird was nearby, the display was a simple U. More often O-F-U, or just plain O-F. Looked almost like pairing behavior.

Bonaparte's, June 18, 1955, I.

Had fewer opportunities to watch the birds today.

Must add a few words about the single adult bird, in complete nuptial plumage, mentioned yesterday.

Almost certain this was pairing behavior. Not only did the bird do "G.C."s toward all nearby flying birds, but it also made little circular flights in the interim (usually not very aggressive, no more than Long Call Notes), and occasionally attacked nearby birds on the ground, (I couldn't watch this very well, but the whole procedure was very reminiscent of territorial defense). A post, I suppose, is exactly what one would expect as a station in a tree-nesting gull. The displaying bird, unfortunately, got very little response from the flying birds. So, the adult would occasionally fly over to a nearby first-year bird on the ground, and would then apparently attempt an "M.C.". I definitely saw the adult do Oblique - Forward - Upright and Head-flagging - Head-tossing in these circumstances. Again, these didn't seem to get much in the way of a response.

Today, however, the adult may have succeeded partially. At least, one of the nearby first-year birds goes into a pronounced Upright, facing away from the adult, whenever the adult flies by.

I am beginning to believe that this adult bird must be a female. It is not very large, and it is not nearly as aggressive as some of the first-year birds. In addition, the fact that the adult did Head-tossing during its "M.C." is perhaps suggestive.

All the aerial hostile patterns I have observed in this adult seem to be essentially the same, perhaps identical, with those of the first-year birds. I have heard first-year birds give Alarm Calls exactly like those of the adult cited yesterday. I have heard the adult give a long series of Long Call Notes exactly like those of the first-year birds. I have also observed a Swoop-"Flying" Soar performance by the adult exactly like the corresponding performances by first-year birds. I can't detect any difference between the voice of the adult and those of the first-year birds. (Unfortunately, however, I have not yet observed a complete aerial Long Call and aerial Oblique Posture by the adult.)

More about glides, in both first-year birds and the adult. Both glide frequently in ordinary flight. Obviously quite unritualized. The first-year birds also glide very frequently during their Erratic Flights. (I have never, incidentally, seen a really good Erratic Flight by the adult). These glides during Erratic Flights may be either upward or downward. Sometimes quite prolonged --- relatively. They do not appear to be ritualized either; but they can be easily interpreted as ambivalent hostile activities. They are thus, in all probability, strictly comparable to those of the Ring-bill; but they seem to be confined to a rather different situation.

Bonaparte's, June 19, 1955, I.

Correction about the adult bird previously mentioned. Apparently a male. Attempted a forced copulation with one of the first-year birds. Just like Black-headed Gull. Copulation Call like that of the Black-headed Gull, except for the characteristic buzzy twang.

This adult continued its usual pairing behavior. Tonight, however, it did several diagonal Swoops and Soars (at Black Tern) during its little circular flights. These Swoops and Soars were exactly like those of the Black-headed Gull, in physical form. Couldn't hear accompanying call very well, but I think it was a "Plaintive Charge Call" (i.e. long-drawn screaming Long Call Notes) during the Swoop.

Still haven't seen adult give aerial Long Call in Oblique.

When I frighten a group of birds, they fly up, circle, silently. This can certainly be classed as a Silent Panic.

Watched an Erratic Flight performance this morning, involving two first-year Bonaparte's Gulls and one Common Tern. It was noticeable that these "Erratic Flights" of the gulls included definite Swoops and "Flying Soars", and that the Swoops were definitely directed, either toward the other gull or toward the tern. This was definitely a relatively aggressive performance.

A few additional remarks about "Gakkerling". Often given by bird on post (first-year bird) when a flying bird tries to dislodge it. Characteristic sequence is "Gakkerling" (in semi-U or semi-O posture, very well orientated, neck sometimes twisted, wings sometimes raised and/or spread) - Oblique - Forward. The "Gakkerling Call" itself is harsh, rapid, and rhythmic. Very much like The Forward Call part of the Long Call. Possibly louder??? The rhythm of the whole usual performance can be indicated by the following diagram.

There seems to be a Landing Call. Given by both the adult and the first-year birds. Relatively rare, (as one might expect in the circumstances, as the birds either land far apart or fight over a small post). Can't say much about it. A series of Long Call Notes, getting successively shorter and deeper in pitch, I think. Probably has fewer notes than the Landing Calls of some other species.

Bonaparte's, June 20, 1955, I.

The unmated adult is still here, and so are a few first-year birds, but the great bulk of the birds seems to have gone. Got very little today.

The unmated adult is still behaving as before; but much duller, as there are fewer birds around to encounter or to display to. He seems to have formed or re-formed his connection with a first-year bird. The latter stays around in his neighborhood, calls to him when he flies overhead, and goes into a U when he flies very near.

Notice that the Alarm Call of flying birds is often uttered with apparently closed bill. The adult gave continuous monosyllabic Alarm Notes as he circled around me, and repeatedly made shallow Swoops toward me and then moved away in shallow "Flying" Soars. Thus the Alarm Call must contain an appreciable element of attack drive.

Saw both adult and first-year bird give repeated series of Long Call Notes from completely relaxed, almost hunched, postures. This was definitely not a display posture.

The voice of the adult, at moderate intensities at least, is definitely less buzzy, more of a scream, than that of his first-year "mate". The difference is slight, however.

Tuesday,
May 11

Damp Lake. Franklin's and Bonaparte's
2:00 p.m.
Bonaparte's O-F wing on water.

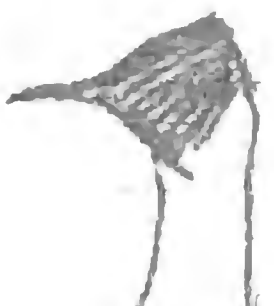


almost vertical V



Apparently pair. Both F-V. ♀ does HF. And
U-HF separately. Upon attack - und in V attacked - V after
attack - V after being attacked

F call is like ordinary Long call, but not so penetrating,
even buzzy, less syllabic, less like B.L.G. Long call.

Ordinary posture looks almost nested.  White eye brows
much less conspicuous than those of Franklin's

MC. One bird. O-F-U-HF - dipping. Other bird. ~~MC~~
F-O-F-U-HF - dipping.

Bill apparently closed in some O's at least.

F is very short necked. I've seen it several times;
combined with HF. This last time accompanied by short buzz calls,
rather harsh, definitely syllabic, bill opened under for each note.

Saturday, April 24

Herring Gull.
a few resting on ice

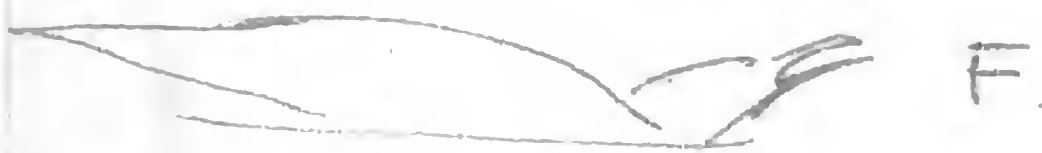
Ch. O. O. OLO. Toward flying birds 12:10 p.m.

The O seems to be without head - Tenny UUUU O
V before attack V after attack V OO. OLO. flying birds UUU
V. V. BAT. BAT. O. OLO. U. V. O. O.

Sunday, April 25

V after attack

Care of ♂ feeding ♀. First both O and F. (Bill widely open in both) then ♀ begins FB in hunched short harsh



sounds, identical in quality with other calls (Long call). (This is the sound I ascribed to ♂ before). ♂ into V. Swims about. ♀ continues FB. (Absolutely no response). ♂ finally regurgitates. ♀ feeds. ♀ begins FB again, this time in semi-F, with HB. No response, breaks up. 3:45. (Male's V, during this episode, looked more anxious than egg).

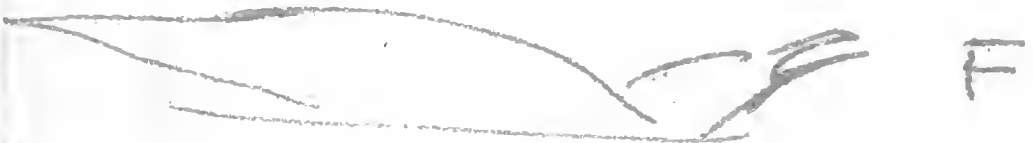


Wednesday
May 19

7:05 a.m. Flooded field near Delta. About 7-10 individuals Bonaparte's, more Franculins. Warm. Sunny. Light wind.

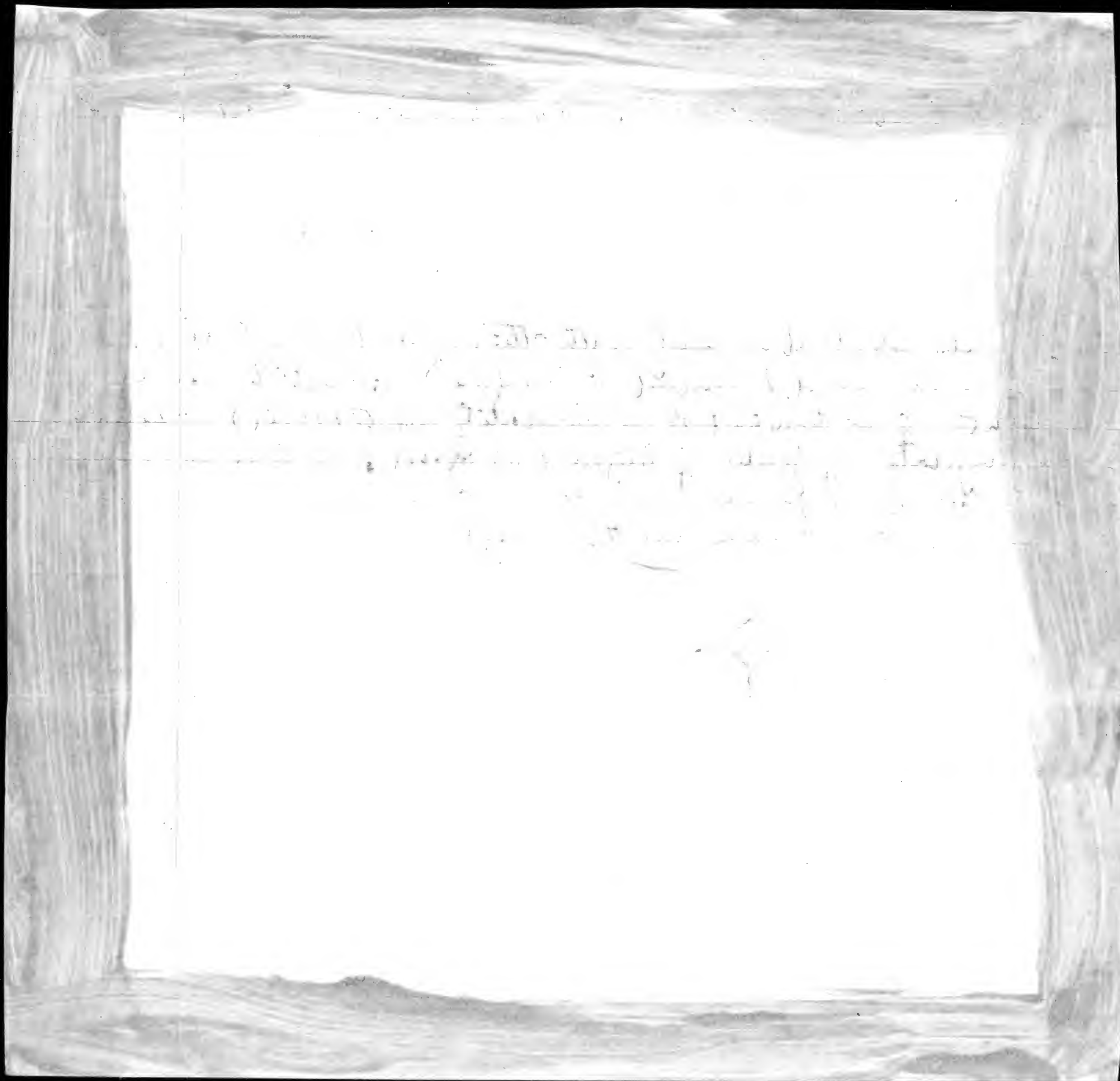
Bonaparte's. O-F, O-F. Both the Oblique and Forwards much as seen previously. F call short chattering version of the Long call.

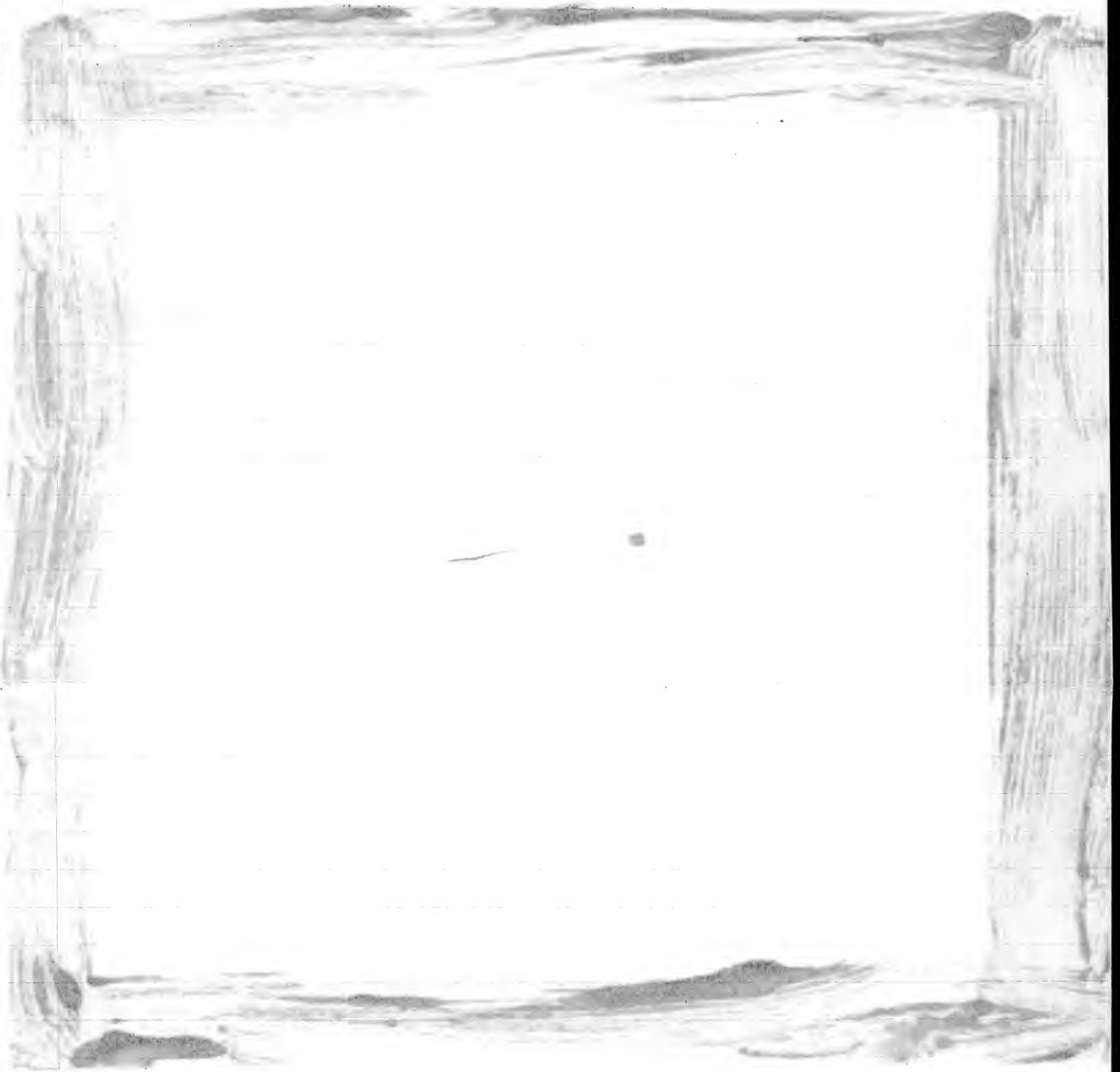
Care of ♂ feeding ♀. First both O and F. (Bill usually open in both) Then ♀ begins FB in hunched short harsh



sounds, identical in quality with other calls (Long Call). This is the sound I ascribed to F before. ♂ into V. Swims about. ♀ continues FB. (Absolutely no response). ♂ finally regurgitates. ♀ feeds. ♀ begins FB again, this time in semi-F, with HB. No response, breaks up. 3:45. (Male's V, during this episode, looked more anxious than aggressive).







Wednesday
May 19

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Bonaparte's, more Franklins. Warm. Sunny. Light wind.

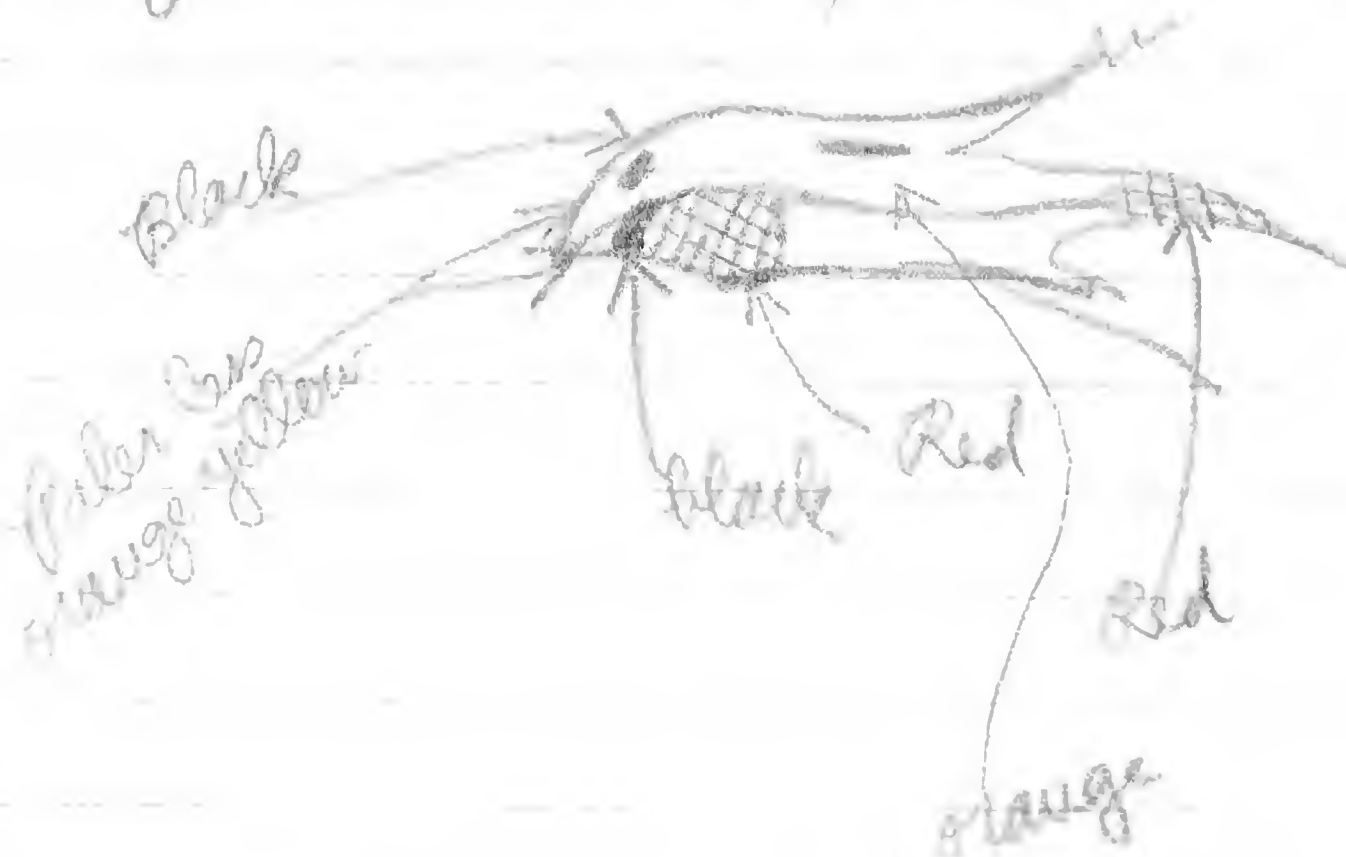
Bonaparte's. ^{O-F, O-F}
^{mm, mm}
much as seen previously. F call short chattering version of the Long call. Both the Oblique and Forwards

California, June 21, 1954, II

Monday,
June 21

California gulls breeding right beside Terns (but on
opposite side of ridge → Ring-bills)

fresh colors Like Ring-bill... but: iris dark brown,
orange yellow of bill (more individual, but not in another,) slightly
more orange. Blood red spot on lower mandible.



Mouth orange yellow
inside — except at red
corners

⊙ LO before attack V before attack V after attack ○

♂ Pelicans ♀ ♂ nothing, ♀ V-HF

Constant pronounced toning. Definite, seen it twice more

☒ LO LO

PP against pelican (by off-bird) again & again & again
(also by on-bird) P before attack on Pelican.

For L, record HD (head-down)

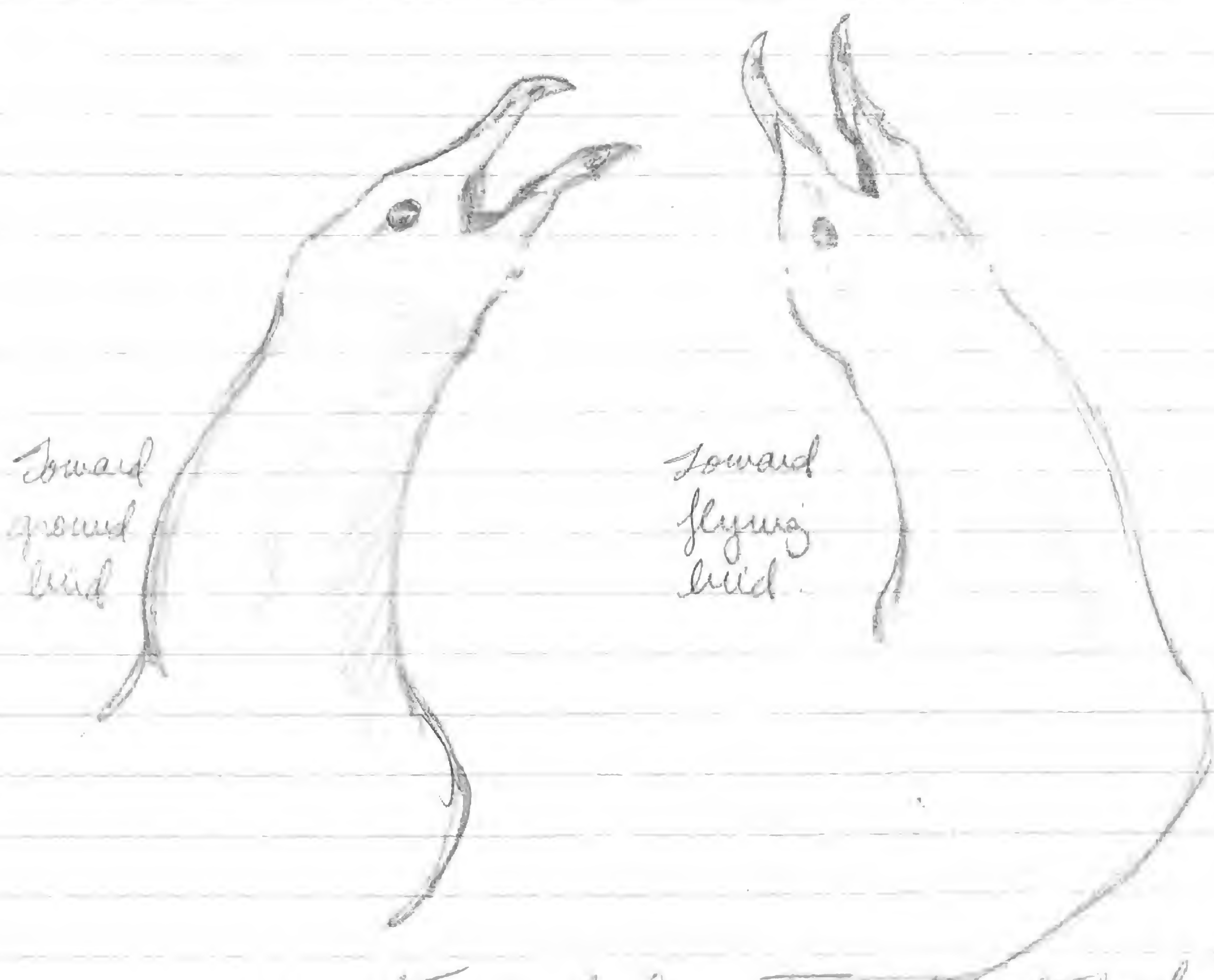
California, May 11, 1955
I

May 11, 1955

Arrive Pelican Island 12:30 approx. Looking for Californias.
Hot, clear, little wind.

At least two pairs on island, possibly another or even

Operture (3rd phase) of the TCB, and the Operture by itself,
without turning, much more vertical than that of Herring Gull,
apparently. (Have seen it well in at least 2 birds)



HD posture may be less extreme than that of either the
Herring Gull or the Ring-bill — less down under the throat, higher,
more forward

Choking like Herring. Usual turning. Upright (mod. →
agg.) like Herring Gull

Californica, May 11, 1955

II

These birds seem to be slier than Ring-bills. Of course, they seem to be in the pre-incubation stage, and many of the Ring-bills are moody, but the difference appears to be somewhat more than this.

Bob back 1:40. So major panic.

May 13, 1955

Arrive Pelican Island 12:00 noon. Warm. Overcast. Mod. wind. Looking for Californicas. Found pair, then a solitary bird 12:30

Again see Ch., just like Humming in form, preceded by PCC or M note (can't hear). Also see TLP (not well), V and HF.

Obviously high. Can confirm this again & again. Perhaps not always however.

Unusual FB pattern.

Rain 12:33.

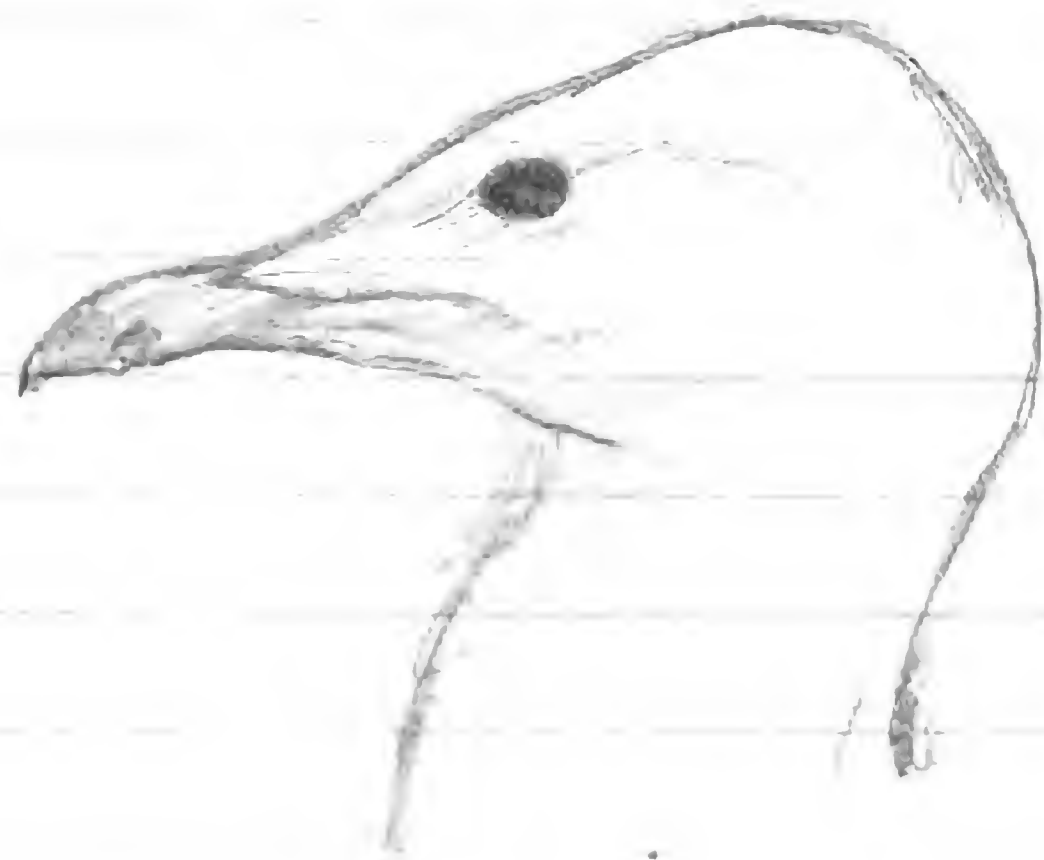
These birds seem to be in an earlier stage of the breeding cycle than most of the Ring-bills. Have favorite spots which they defend, but don't stay there very long. May have several favorite spots. In the pair, the ♂ doesn't respond to the ♀'s FB with anything more than regurgitation.

All gone now 1:32. Bulk almost missed.

Choking by ♂, the minute the ♀ approaches him with one or two T's, apparently FB.

California, May 13, 1955
II

Cop attempt. Preceded by mutual T. Both birds in semi-V, most of the time. ♂ stands for a moment after mounting, then starts to flap wings. ♀ T's once or twice after mounting takes place, then starts to run. ♂ falls off. ♂ stands in V. ♀ U-HF-HF-HF (side to side). ♀ then dashes at Ring-bill approx. 5 yds away - apparently redirection. Does "HD" after attack (Like all the "HD" I have seen, it is almost an L). ♂ doesn't take part in dispute. ♀ back, walking in V (with eyes half-shut, lower eyebrow very conspicuous). Does T from V when she reaches the ♂ 2:53



Head seems to be rather exaggeratedly this shape when alert, in many V's, and in postures

Head appears distinctly less "fluffy" than that of the Ring-bill

Grey of mantle slightly darker than on the mantle of Henney or Ring-bill. Difference not conspicuous. This is a long-low species in body shape. Long neck. Small head.

California, May 13, 1955
III

After attacks, (with R - but I think a "comfort" R, as the bird had been battling, and then shuffled wings after the V)

Leaving 5:00 p.m.

May 16, 1955

Arrive Pelican Island ca 11:00 a.m. Californians finally show up ca. 12:00. Very inactive.

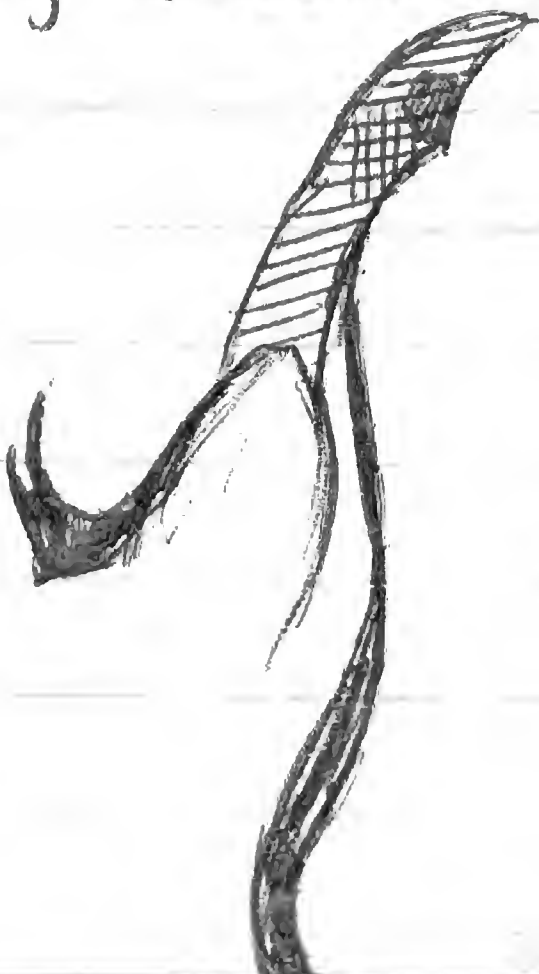
Have LCN with brief O (of the semi-V kind)

Choking seems to be unusually common in these birds - unusually common, that is, in comparison with HD-O and V.

Still - all the T₂ performances I have seen have had only a phase HD-O. Is this just low-intensity?

Another cop. attempt - unsuccessful. Not much new to add. ♂ definitely opened mouth when mounting - as if uttering cop call. Mutual T; ♀ in very ans. V, much HF, eyes half closed. ♂ does reduction attack after being thrown off 3:53.

Again HD-T. Could hear call this time, although not too close. Voice seemed intermediate between delawarensis and argentatus. Purer than former, hoarser than latter.

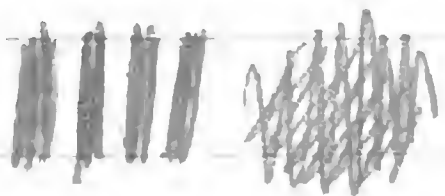


Lines on lower mandible during O

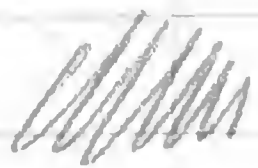


California, May 18, 1955
I

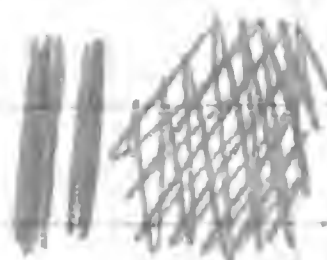
6:00 p.m. Pelican Island.



Backward Oblique toward head (Herring) on ground.

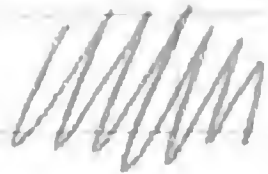


Also posture like V, with bill open very wide. LCN? PC? M?

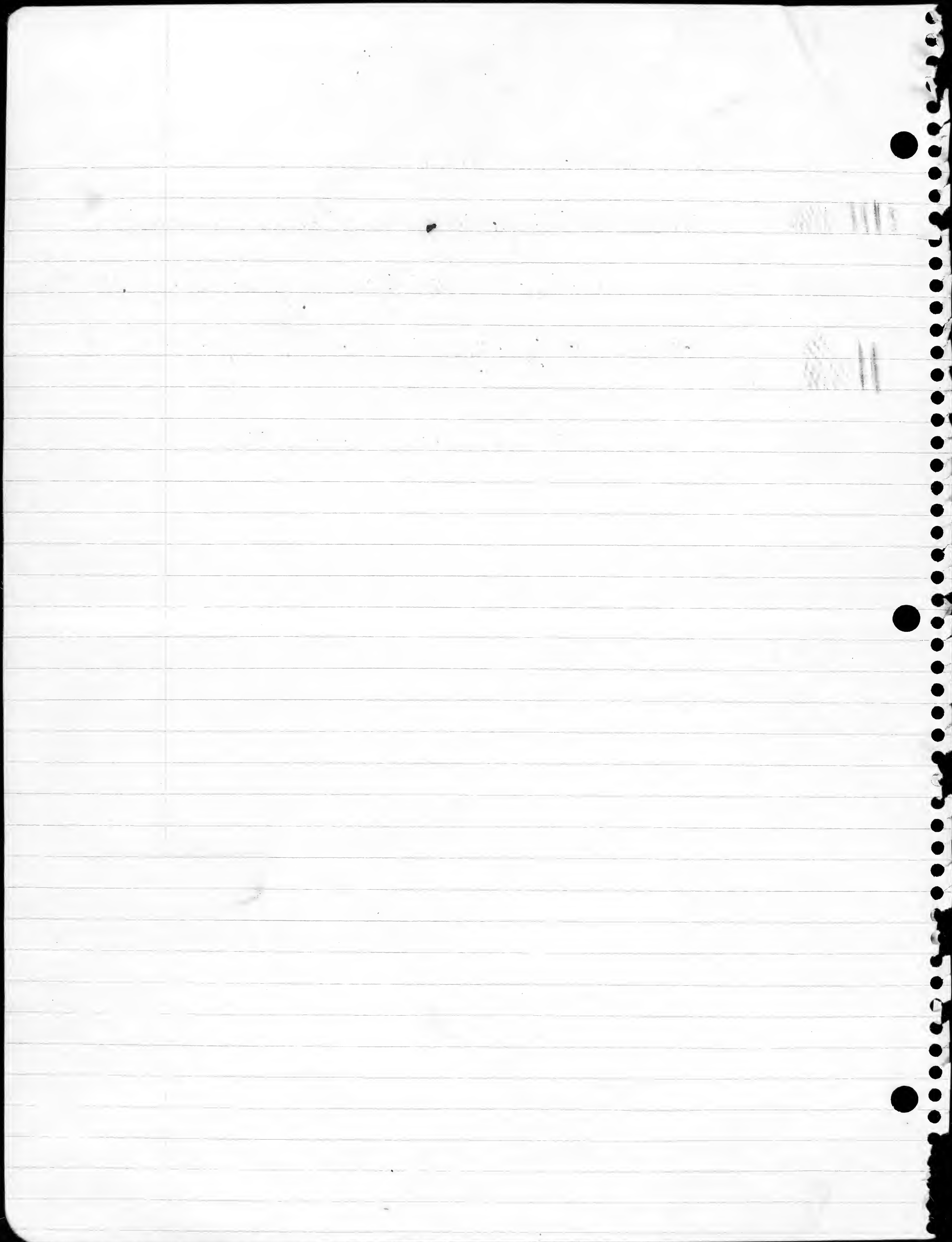


lends.

HD - O is certainly the typical, i.e. common, display toward flying



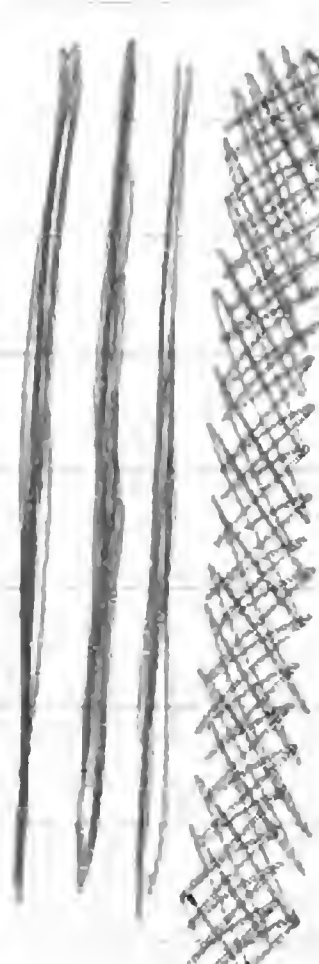
HD is certainly not very low. No lower than L



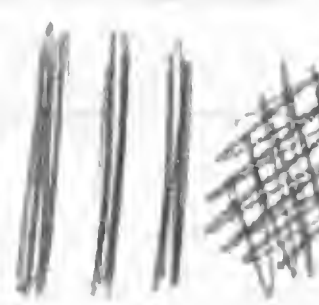
California, June 19, 1955,

I

Dog Lake. Pelican Island



Watching ♂ California eating pelican eggs, when a Herring Gull approached. The ♂ California first started to retreat, then rushed toward Herring Gull, giving "New" call. Just like my drawing of New Call in Herring Gull, but the head inclined more strongly downward, so that the lower mandible parallel and almost touching, the neck formed itself could be transcribed as "Waaaaaah". Not very loud. This "New" call was obviously very hostile, probably relating aggression. It certainly caused the Herring Gull to retreat.



Also saw New Call - Gape before attack - V after attack performance.



atricilla

Chincoteague Bay,
May 25, 1956

Have seen quite a lot of (usually) low intensity aerial behaviors — from time to time in Silverpaw Bay and in the colony on the island here today.

There is a definite aerial L.C., quite common in various circumstances, (I was quite surprised to find out that it is a common reaction to pot. preds., i.e. us, in the colony). The sound of the call is apparently the same as that of the ground L.C., although it may be abbreviated somewhat, and I am not altogether sure that the preliminary brief notes (see below) are always included. Usually given from a glide like that of Franklin's Gull, from the same postures. I have, however, heard 3 or 4 aerial L.C.'s which were accompanied by wing-beats, and seen a few more in which wing-beating resumed before the call was completed. Most of the aerial L.C.'s do not include the subsequent "T" note. The few I observed which did include the "T" note did not include any aerial T movement.

The usual aerial LCN is rather peculiar. Bisyllabic. "Kaw-up". Might be an "Alarm LCN", but perhaps just low-intensity. Given from the usual unritualized postures. I have heard a few, longer, monosyllabic aerial LCN's, which might possibly be transitional to PCC notes or notes intermediate between PCC notes and LCN's. This bisyllabic LCN of the Laughing Gull is very reminiscent of the "Kayek" notes of the Gull-billed Tern.

I have seen a few low-intensity, brief, pursuit flights, with and without the usual low-intensity, the coping and soaring movements. These were probably not the most extreme forms of these patterns in the species, but they were at least recognizable. Unfortunately, they were all too far away from me for me to be able to hear the accompanying calls, if any.

I have heard several long, plaintive notes given by birds in

atricula May 1956

air. These sounded very much like low-intensity PCC notes of Franklin's Gull. One of these notes was definitely given by a gliding bird, disturbed by our presence in the colony. (And it is possible that one other of these notes was also given by a gliding bird in similar circumstances). I couldn't see the posture and/or movements accompanying the other aerial PCC notes I have heard.

These birds have a typical Hydrocolous-type ALC. One, two, or three syllables. Usually very sharp. A few of the very late ALC's intergrade with the very late LCN's — or vice versa.


This species has a definite "Attack Call" given by birds attacking or swooping at other flying birds when the whole flock is flying near us. A shrill, rattling sound "Kareeeeeee" sort of thing.

I have also heard a few notes, by birds swooping at other birds, which were intermediate between the PCC notes and the extreme Attack Note.

When we walk into a colony, the birds "circle" us in the usual lanner fashion (but they aren't as disturbed as they might be expected to be — no attacks on us).

I have also heard a number of calls on the ground — without being able to see them.

A lot of notes that sound like the ground (i.e. short) PCC notes of Franklin's Gull.

A lot of Long Calls. The commonest form is more or less like this:  Some of

the Long Calls seem to lack the preliminary brief notes. But this is relatively rare. Some of the Long Calls include many more long notes in the second half — as in the case of the 1st of the 1st of the 1st.

atricilla, May 25, 1956, III.

bill. These are relatively rare but actually not uncommon.

General note about the voice of this species. In spite of various minor differences, it sounds remarkably like Franklin's. Perhaps a little harsher at times, but even this is debatable.

I think that I have heard a few Landing Calls like those of Franklin's Gull, but I am not certain of this. But I have definitely heard & seen several birds land with a complete L.C. (of the relatively brief type).

atricilla

Chicotague Bay,
May 26, 1956

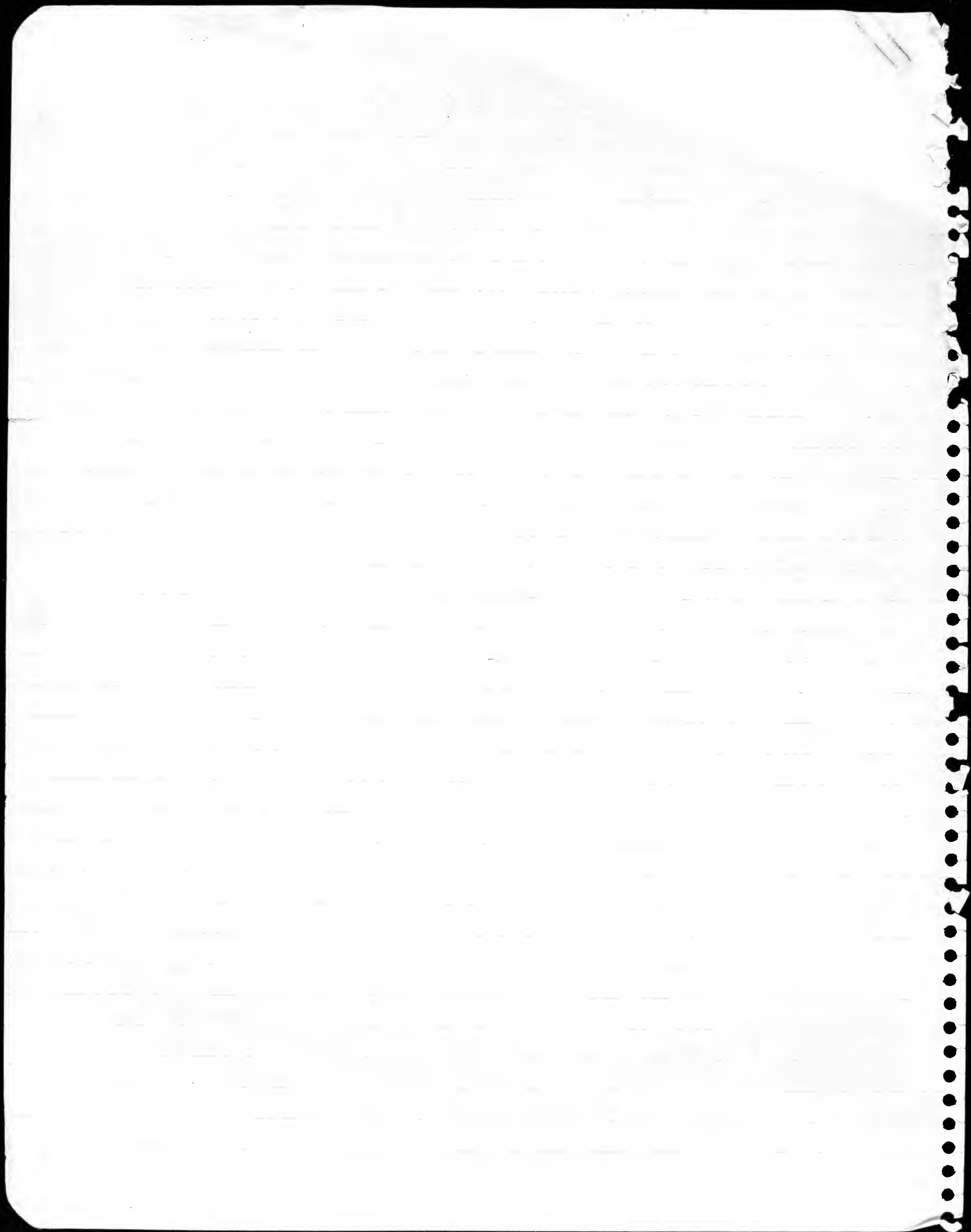
Can confirm a few points.

Yes! The usual L.C. is almost always the type sketched on the preceding page. First rising, then descending.

During the general confusion when the birds return to their nests after a panic, there are a number of little, brief, swoop-attack-scan and/or rise performances, presumably by birds repelling "trespassers" flying too close to their territories. Possibly also redirection. Anyhow, the brief swoops are often accompanied by "Attack Calls" like those described on preceding page. "Kaw-kaw-kaw" sort of thing.

I suppose that the brief aerial LCN's of this species (and also, to a lesser extent, of Franklin's Gull) may be connected with the brief aerial LCN's of the Little Gull.

During the general confusion after a panic, many birds will hover over their nests and utter quite long, rather monotonous, quite monosyllabic "Kow" notes. Are these "Plaintive Long Call Notes"? Probably.



February 16 thru 19, 1954, Bronx Zoo, More or less a "Communal Area"
 March 28 thru 31, 1954, Chimantique Va., " " " "

Weather Nor

Longfellow

U	3	18	= 21	Bird in OLD attacked + 11
LCN	50			
O	22	} 86	= 87	Bird in U attacked + 1
OLO	64		= 82	
HFB	96	21	= 117	
HF	1	2	= 3	

By attacks after attack

U	1	7	= 8
LCN	1	0	
O	0	0	
OLO	0	0	
HFB	5	2	= 7
HF	0	0	

By escapes before escape

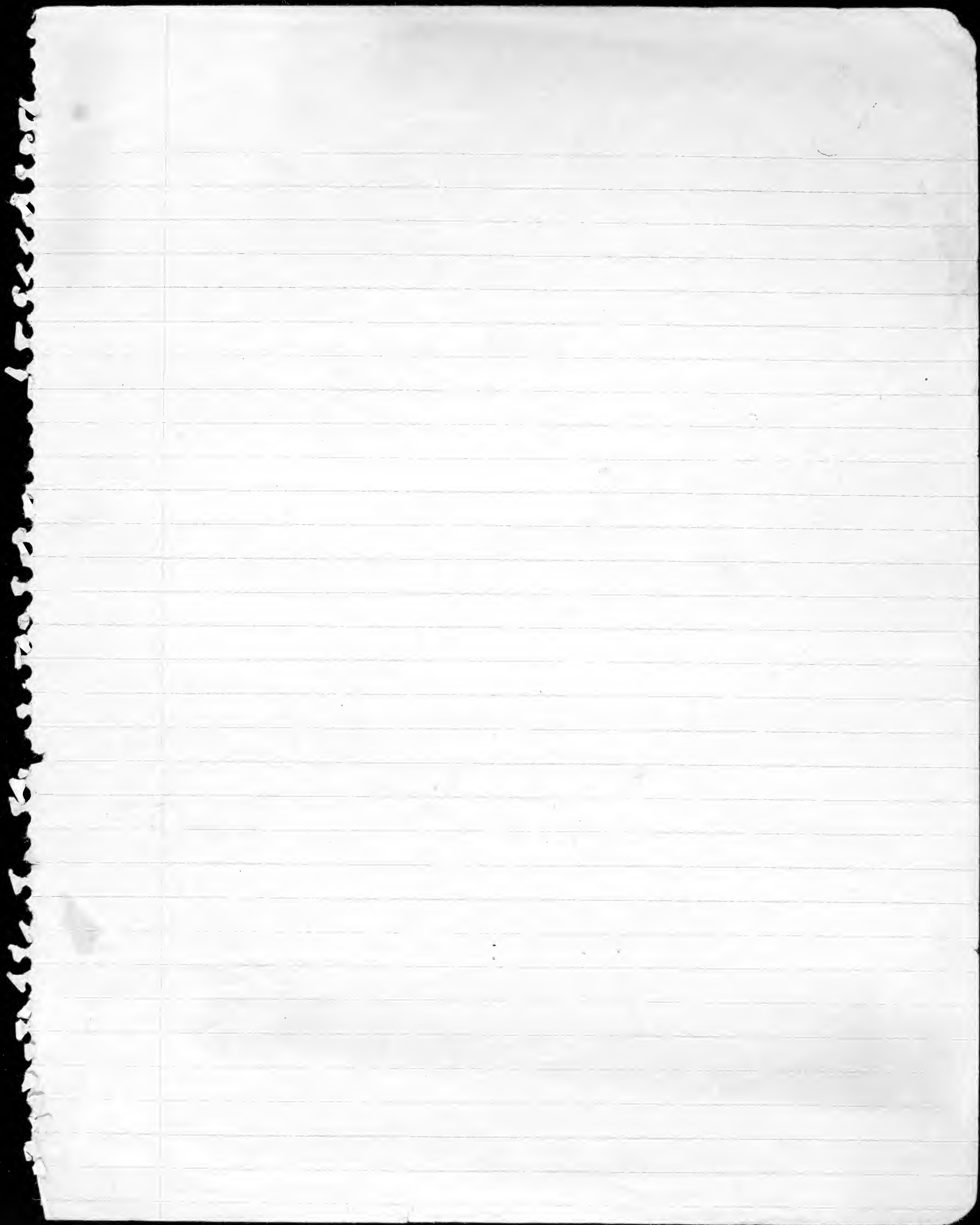
U	1
LCN	0
O	0
OLO	0
HFB	0
HF	0

By attacks before attack

U	0	4	= 4
LCN	0	0	
O	0	0	
OLO	1	3	= 4
HFB	0	0	
HF	0	0	

By attacks after being attacked

U	4
LCN	0
O	0
OLO	0
HFB	0
HF	0



Prattville Jan 27, 1935

Heard "Chirrup" when disturbed by land grouse.
Again again. No particular posture, except slight stretching of neck.
Again. Forward stretching of neck, plumage flutters. Followed by ruffle.
Sound sometimes "Chirrup".

Twitter often with bill closed, but I haven't seen any single
intensity forms this morning.

"Chirrup" occasionally double: "Chirrup chirrup"

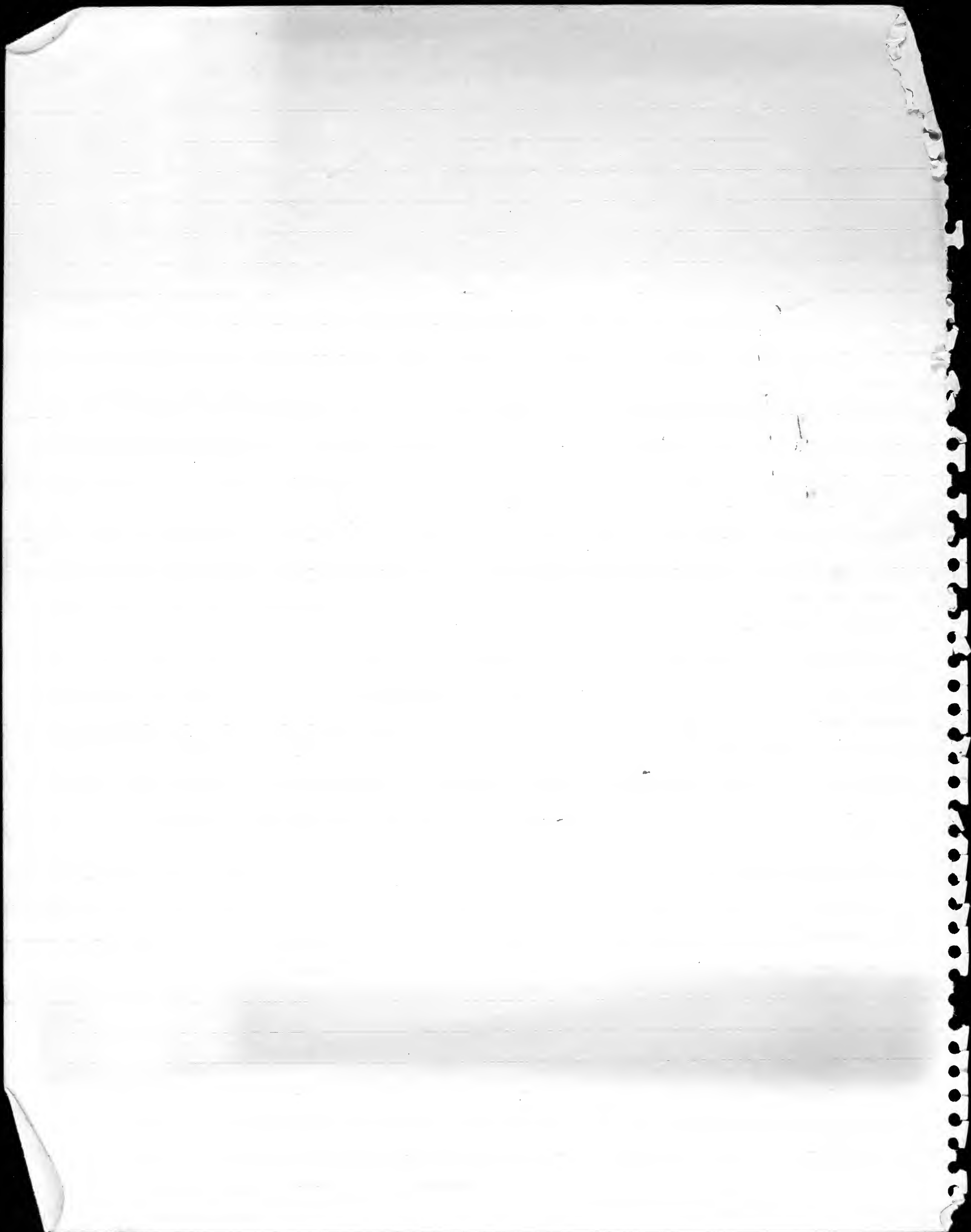
Almost all movements, however brief, followed by ruffle.

Twitter is a melodious twitter. Low intensity, bill closed, only
seen on these subjects.

Higher intensity (and/or more aggressive) forms of twitter with
bill open. These sometimes 2 or 3 syllabically.

One
Chirrup posture

Found a great deal of "Chirrup" this morning. Why?
Chirrup more conspicuous than twitter?



Bronx Zoo

January 16

1954

Arrive Xiangyang Gull cage 8:40 a.m.

Both Oblique (+ Semi-Oblique) and Vertical FB shown by birds perched toward flying birds

Notice again how much the song calls of the Xiangyang and Ring-billed are similar.

Birds not active 8:43

In separate mutual sequence O(LO) - HFB - HF -

Cpr. One of these two birds has an almost complete hood, other in complete winter plumage 9:38

Often without LO

O often without HFB

HF often single, rather than repeated

Cpr. seen again & again

Have seen HFB - O - LO - HFB - HFB

Double HFB not uncommon

Occasional song call note with brief trill of O

Two HFB's without any form of O. Again, this time possibly preceded by song call note

LCN - LCN - HFB - O - HFB

General tendency for "opponents" to face one another during O.

HFB lower intensity than pure O?

LCN - HFB - HFB - O - HFB - HFB

This LCN often done in completely silent, hunched - almost, posture

LCN - HFB - LCN - LCN - O - HFB

Certainly, the LO usually accompanies a long O
seems quite able to precede HFB

Start Count
February 16, II

One O followed by
LO

O - LC - HFB long pause HFB pause HFB
pause O - HFB



HFB after attack O OLO OLO HFB HFB HFB
O LCN LCN OLO HFB HFB OLO⁴ HFB U
HFB after attack LCN³

February 17

Arrive 8:15 Rain. Colder. Gulls on perches as
usual

O HFB O HFB HFB HFB OLO OLO HFB
HFB OLO HFB OLO HFB HFB OLO HFB HFB
O HFB OLO HFB OLO HFB
HFB (flying by, low)

OLO HFB LCN LCN LCN LCN LCN OLO
HFB HFB OLO HFB

(Definite 's and long calls toward flying birds,
very now and then)

LCN OLO HFB LCN LCN LCN LCN
OLO (advancing upward) HFB OLO O HFB HFB
HFB OLO O HFB HFB HFB HFB OLO LCN
OLO HFB OLO LCN HFB LCN LCN LCN HFB HFB
LCN LCN LCN LCN LCN LCN OLO LCN LCN

HFB after attack
LCN HFB HFB LCN³

Shawyer 15

about 7:35. sunny, cool

Call bird returned OLO OLO HFB HFB HFB HFB⁴

(last 3 alone)

On road below, characteristic short rather pronounced "mew"s, accompanied by some slight head-turning. As this bird of oak FB, the response, anglican

LEN OLO HFB HFB

Two birds came together, in which OLO-HFB HFB
 L' (some of less max) - HF. Two (that bird also)
 OLO HFB HFB - some L' - Two - Two birds, not very
 well synchronized.

OLO HFB LCN LCN LCN OLO LCN

Separation or low intensity attack



HFB after attack HFB O

Attack call? Hawk "Aghh" "ughh"

U before escape OLO LCN - HFB

O HFB HFB (This O long sustained limit still)

(without an L element) OLO HFB HFB OLO-HFB

HFB U-HFB (Pursuing?) OLO OLO-HFB

O¹ LCN LCN LCN LCN LCN O² OLO LCN

L¹³ LCN-HFB-HFB¹⁷

February 18, II

LCN LCN - HFB after attack HFB after attack
 OLO OLO-HFB LCN LCN O OLO-HFB OLO
 LCN U LCN LCN LCN OLO OLO OLO OLO OLO
 OLO OLO OLO OLO 13 HFB'S OLO OLO-HFB
 LCN O O OLO HFB HFB HFB HFB
 OLO O HFB HFB O HFB OLO HFB HFB
 HFB-HFB-OLO-HFB-HFB OLO (4 HFB'S)

February 19

Arrive 7:40 Gulls doing nothing, as usual.
 OLO-HFB-HFB-HFB OLO HFB U (aux) after
 attack OLO Numerous examples of silent attack
 incl. mcr



OLO-HFB OLO-HFB-HFB O-HFB
 (One bird, possibly involved in pairing, does
 U-HF-HF-U-O-HFB (in U) -U-HF relax.
 OLO-HFB O LCN-OLO O OLO HFB-OLO-HFB
 OLO-HFB OLO-HFB OLO-HFB OLO-HFB
 HFB-HFB-OLO-HFB HFB (lay itself)

March 28

March 29

single bird alone - OLO - HFB - HFB toward flying birds

same bird, 2, 6:17 P. Does OLO - HFB as another approaches - then U - HF after latter lands. Both does U - HF single? Latter flies off. Then, in air, one circles with third bird. Both birds fly around, occasional lunge or glide, horizontal, wings less, more vigorous. B does occasional O - HFB or OLO - HFB when they fly nearby. Third circles, some distance away. Both A & B fly. Both fly around. Bird land back to B. Both A & B. Both U - HF? No sound at any time. Single. All break up 6:11 P.

General Notes

Very similar arrangement to - 3:19. When two birds go through MC, one or both then fly away, sometimes circle back. Not much aggression, during these circular flights, lunge.

B does O (LO?) - HFB as another bird lands beside it. Same. Then B attacks - nervous. U - HFB - U after attack.

Three flying about together. Silent. Lead changing. 2 land. Mutual OLO - HFB - U - HF (almost certain) - third lands. Immediately drawn off by red bird attack 8:10

U after attack

U - HFB to flying birds
Call before attack

Bird in U attacked

U after being attacked

March 29 II

Typical mutual ceremony is something like
OLO-HFB (often repeated) — V and HF (rather different
from B h g) — Cpr and/or pecking at the ground — flying
up, with usual long call (like typical Long call, I think,
and, possibly HFB call) — return.

Certain no swoop, soar. Probably no
ritualized glide. Obvious acceleration during HFB.

Three pairing behavior in same communal
area. Two ♂'s on ground. Visited by ♀'s.
(One ♀ visits one male after the other). Mutual ceremony.
Notice that the OLO of both ♂ & ♀ is disrupted by ♂'s,
and that all, or almost all, the V's are "Aur" types).
Three times ♂ followed MC by attacking ♀. Each time
♀ flew off in circular flight, (one time a ♀ began by giving
aerial Long call and flying at a neighbor) S.S.

This "communal area" is a meadow exposed by
low tide. Quite near the colony area proper.

OLO-HFB very common toward flying birds. U
common as flying bird comes in to land.

OLO before attack HFB after attack Then, usual,
U-HF (like B h g). 7:00

There seems to be no Landing call.

None of the usual "chases" seem to be very aggressive,
or even moderately aggressive, by B h g. started 9:18

March 20

General use

March 30 II

U U U Young birds near 9-12 in communal area. All
colony has today through birds OLO-HFB
OLO-HFB-HFB-HFB O

HFB after attack U after being attacked O
HFB in July 10:47

U before attack U after attack U OLO-HFB
OLO-HFB U O 11:07

U O U before attack U after attack O OLO-HFB-U
OLO-HFB-U OLO-HFB-HFB-HFB U before attack U after
attack Bird in U attacked U after being attacked 11:27

OLO-U OLO-U U OLO-HFB OLO-HFB-U-HF

OLO-HFB-U Bird in OLO attacked Bird in OLO attacked
U after being attacked U before attack U after attack O

11:48

Side coming in
Leaving 12:17

Gulls, with a very few rare brief exceptions, are gone
from colony and communal areas in the afternoon. Sunny, but
very strong wind.

March 31

Arrive colony area 6:00 am Cold clouds, strong
WSE wind felt very high. A few gulls only. Inactive

Most very interesting case. Strong and ♀
Birds complete MC, a few off. Mostly of a few obvious
aggressive. ♂ and ♀ both land together, almost simultaneously
completing MC. Much the ♂ flies off. Circle back
to ♀, who has remained next at same spot. Mutual U-
HF (or much) of the off. Circle swimmers from

Chase

Some obviously hostile. Some more perplexing; (sexual element ??).

Some very playful. Just two birds, (pair?), flying about together.

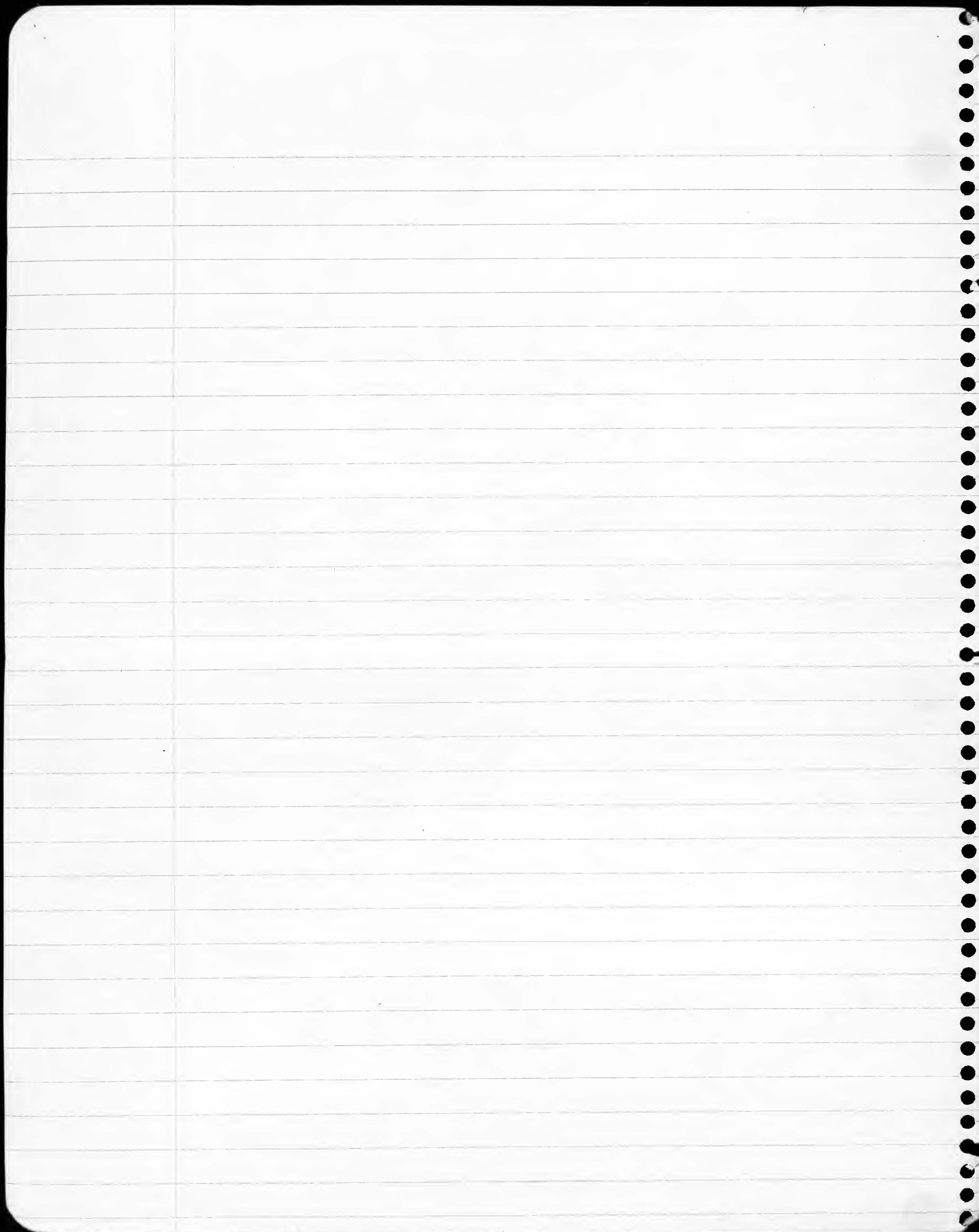
Others include actual Long Calls and (probably) complete Long Calls and (possibly) HFB calls.

Some include sudden accelerations by Pursuer. The Pursued avoids them by slight soaring or side-slipping movements — obviously neutralized. Pursuer then soars or side-slips also. Result is that Pursuer falls behind again.

Most chases involve two birds. Some involve three; (pair plus "cavaliers servente")

Roles are rarely exchanged. But the Pursued of one chase can become the Pursuer of an immediately following chase.

Beginnings of chases also vary. Some just begin in air. Various suggestive cases are different. (1) Pursued ♀, after MC with ♂ on ground, flies up and is chased by third bird. In one case, the pursued ♀ landed and had MC with this third bird. (2) Bombly, a pursued ♀, after chase with pursued ♂, lands beside a second pursued ♂. He is attacked immediately and then flies off. Second ♂ follows. Result is Pursuit Flight involving the two males and not the female.



Thursday
August 12,
1954

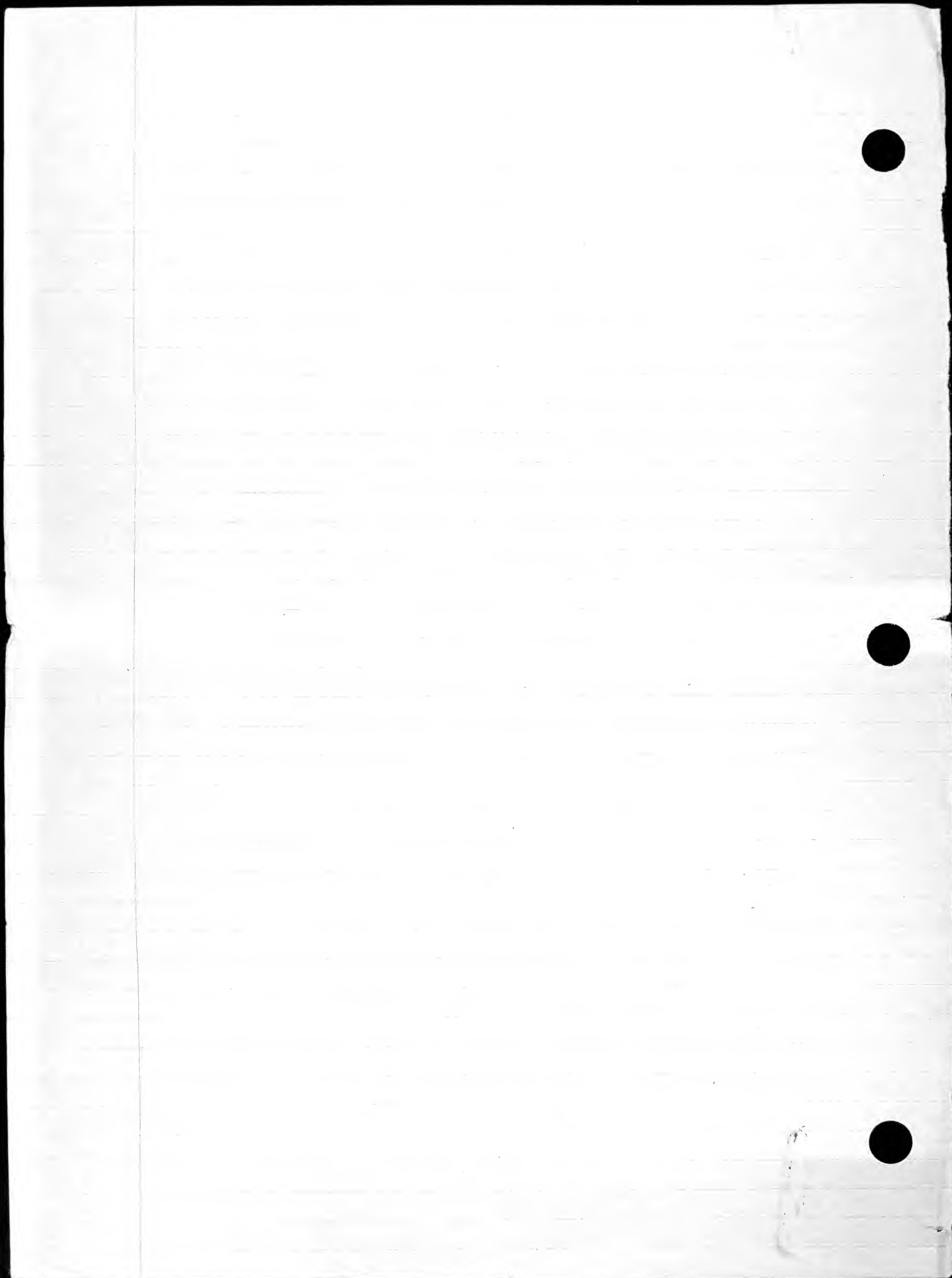
Watching Laughing Gulls in flight cage of Bronx Zoo.

Notice Ruffle in several cases without real Ch.

- (1) After rush, after OL, in T and particularly H.
- (2) After rush, after OL, in V with some PH (this latter may have been Ch int. mov., but without any sound or characteristic Ch movements)

- (3) OL, pause, rush in V with Ruffle, stop, itervals in V with Ruffle.

All these cases during disputes with large birds of other species.



11
Loughborough full ABC like large form
The first part of the word is stressed, the second part is
less so the supradialect of Anglo-Saxon

11

Heaving

March 16, 1955

6:20 a.m. Chumotague marshes
Overcast Warm

♂ Heaving Gull on tundra, on a small clump surrounded by water. Does L.C. in O as ♀ lands beside him. ♀ does L.C. in O as soon as she has landed. (i.e. the female is behind the male in her reaction) Then ♂ does C-HF ♀ very nervous, jumpy, flinches, may have shown traces of a display, we missed, then does C-HF ♀ flies up. ♂ stands, relaxes, starts to preen.

This is all very reminiscent of the pairing of the hooded gulls.

Single bird, apparently extending, gives M. Run a few feet, lands again, gives series of M notes, stands. 6:45.

March 17, 1955

Chumotague Marshes 6:15 a.m. Fair
♂(?) in note. Spent by ♀(?)
HF ♀ flies up

Watching King-bird, 11:30, alone, on

at the top of a tree. Little as a matter

Ring-bill flies near.
step or two, flies up
more of flying up.

Then R, gradually takes a
D.E. R looks like int.

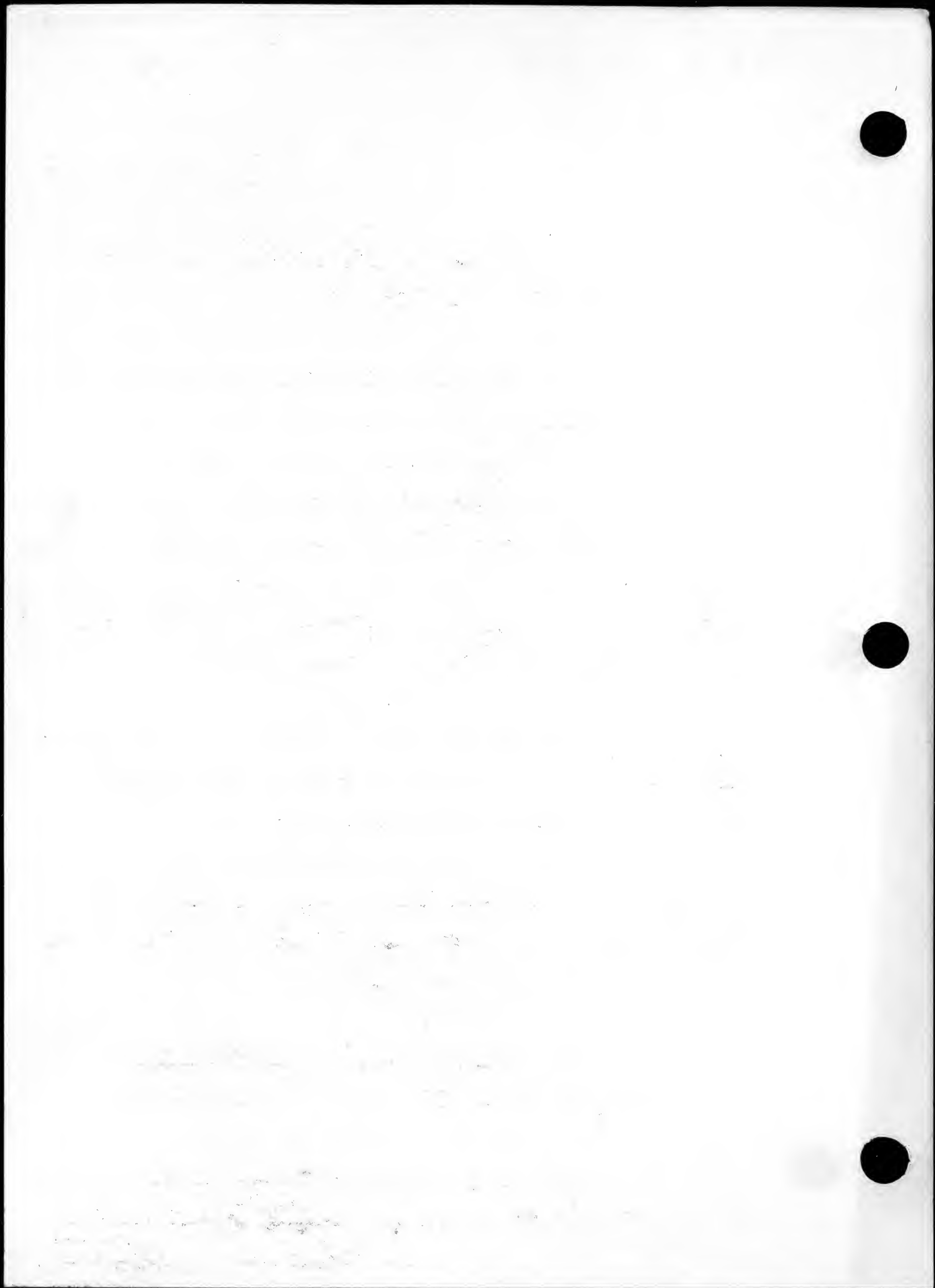
Heung

March 19, 1955

6:27. Chonsteague Marbles. Cloudy.
Cool. Little wind.

Incident much like that of March 16, (couldn't see it well), with the addition of one T by ♀. Evoked by ♀ flying, and she then goes long distance and lands, disappears from view.

7:25. ♀ comes in to join ♂. ♀ flying, with a few LCN, ♂ on territory standing in V, does HF away from ♀ long before she comes near. Then ♂ into HD with LC, just before ♀ lands. ♀ goes into HD right upon landing. Both then O with LC. Then both V. ♂ flies up. ♀ stands in aux. V. ♀ flies up. They circle. Vague together. ♀ utters quite a burst of LCN's. ♂ a few LCN's, probably a series of M notes. Land together (not in same place). M.C. little more than mutual V, as far as I can remember. ♂ flies off. ♀ stands in aux. V. ♂ circles, probably gives complete or almost complete LC. ♀ flies up. Starts to circle. Then vigorously chased by third bird. This third bird then leaves. Chase gets confused. I think the roles were reversed, and the ♀ chased her original chaser. Then, I think ♂ and ♀ land together in distance. Probable another M.C.



Herring

March 20, 1935

5:55 a.m. Chumotoguel Cloudy
Moderate T[°], tide high.

Herring on ground does HD-O toward
flying birds.

♂ Herring on ground, feeding. 6:23
♀ flies near. ♂ does HD-O. ♀ lands. ♂ still in
O after she lands. ♀ aux. V, HF, aux V. ♂ in V
♂ back to feeding. ♀ flies off, joins another ♂
on water, does M.C. with him

Another M.C. ♂ does O (couldn't hear
call) - V and HF. ♀ does O - V and HF -
H and T, flies off, disappears

Single bird on ground. Gives notes in
2 to flying birds. These notes probably M, but
we couldn't hear them.

M after attack V after attack
V-HF after attack

HD-O toward flying birds (with LC)
U. O (with LC) before attack. V after attack

Skimming

March 20, II

The whole pairing or pair-formation process, as we have seen it, it is very much like the pairing of Black-headed Gulls or Little Gulls before the occupation of the actual colony area. Semi-territorial and aerial.

Solitary birds, presumably single males, pick out stations, and (presumably) territories (the gulls are so scattered and scarce that territoriality is very rare and we have had little opportunity to observe actual territorial defence).

These males display at all flying Skimming Gulls (apparently not at flying Ring-bills).

Some flying birds, apparently female and presumably unmated, land beside the males.

M.C. May be followed by one or both birds flying in circular flight. M.C. upon return. Return may be to a new site.

Warming

March 21, I

21 MAR Chincote. Harbor

C. 10 am.

MOD. TEMP. LITTLE WIND. INTERMITTENT
RAIN. WATCHING WELL-MATED PAIR.
DON'T STICK TOO CLOSE TOGETHER -
OCCASIONALLY COME TOGETHER. OCCASIONAL
CIRCLING FLIGHTS.

M.C. SEEMS TO BE NOTHING MORE
THAN U-HF ON THE PART OF THE ♀
EXCEPT FOR M ASSOCIATED WITH
FEEDING.

♂ COMES IN TO ♀ GIVING M, ♀
ALSO GIVES M. ♂ DOES U AFTER
FEEDING ♀, ♀ MAY DO SO AFTER
BEING FED.

♀ DOES M TOWARD STRANGE FLYING
BIRD, DEFINITELY NOT HER MATE
(BUT MATE IS ONLY SEVERAL FEET
AWAY FROM HER).

♂ DOING O AS YOUNG GULLTRIES
TO STEAL FOOD. ♀ DOES M APPARENTLY
DIRECTED TOWARD THIEF.

U AFTER ATTACK. U after attack
U after attack

♀ does U as ♂ flies overhead then
series of M notes, after he has flown past her

Werning

March 21, II

landed 10 yds away, and began to feed

HD - O towards flying bird.

Note about territory, etc. We have seen a number of examples of territorial defense today. Much as might be expected. It is noteworthy that trepanners make no retreat - leave immediately, usually without even threatening.

Juveniles seem to be tolerated, more so than when they trepan.

Have seen no threatening (i.e. threat or counter) reactions between Ring-bills and Wernings. Just seem to ignore one another. Territorial Wernings don't even display at flying Ring-bills, even when the latter are silent. Territorial Wernings tolerate Ring-bill trepanners.

Herring

March 22,
Tuesday

6:45 a.m. Chukotague Thales to
moderate. Wind southerly. Rain pouring.

MC (by) visiting female the male one
successful flight.

Another case 1 female successful flight

MARCH 23
CHUKOTAGUE
THALES

6:05 a.m., cool, moderate wind.
Apparent territorial ♂ Herring
over DOBS L (presumably with M)
TOWARD FLYING BIRD

MC when ♂ joins ♀ ♀ U - HF. ♂ U -
HF - U - HF - U.

Apparently territorial solitary ♂, gives series
(5 or 6) M notes to flying bird who ignores him.
(M notes accompanied by trace of L)

Apparently territorial solitary ♂, gives C,
(with 1 apparently) to flying bird.

Apparently territorial bird give ALL, dan-
gerously, in a completely relaxed posture (the bill
movements incidentally, more conspicuous).

Herring

March 23, II

////

Mated bird does U toward flying mate.

March 23,

ca 1100 am Calm Warm Cloudy.

Herring.

////
////
////
////
////

♀ mutes ♂ M.C. Muted part, but
Coughs & then ♂ attacks. ♂ U after attack.
Then ♂ WF (quite extreme) ♀ U after being at-
tacked, then stands, flies away

////
////
////
////
////

2 birds fly over saltstack, both appear.
Herring one lands. Obviously ♂ on station
Gives large series of M notes as he lands. One
other lands on ground a bit later.

////

Solitary ♂ Herring on territory. Ch toward
flying bird.

////
////
////
////
////

Apparently ♂ Herring keep their
territories for days here. Or, at least, same terri-
tories are occupied on successive days by single
birds.

////

Apparently ♂ Herring doesn't seem to
object to Langston's territory.

Werning

March 25 II

Unmated (approx. at least) ♂ Werning
gull on territory. Harshly screaming. Ring-bill
flies low overhead, circles. ♂ Werning stops pr.,
looks, goes back to pr. Ring-bill silent
all the while; flies off after circling. The Werning
must, therefore, have been able to tell the Ring-
bill by sight alone.

Solitary Werning (adult, except for black
spot on bill) alone on site which may or may not
be part of territory. Feeding. Does HD-C (with
it) as second bird lands. (Second bird is juv.
juv. except for almost completely adult mantle
and bill like first). It stopped by house. Second has
really landed. Stands in relaxed posture. As sec-
ond does B-HD-C (complete Trumpeting call)
third bird also. First unmoved. Does 2 with
it as third lands. (Third is completely juv. except
for a few sparse adult mantle feathers). Third
goes in anxiety. Then three separate, first,
all relaxed, except third who remains alert. Then
first does HD-C toward fourth coming in to land
(first's C, at least, with L.C.). First relaxes when
fourth has landed. Fourth goes into aux. C.,
perhaps a trace of HF. All fly off 7:22

Worming, March 23 III

One Worming of feeding pair earlier. One off at
Ring-bell. Apper. expensive; but breaks up almost
before it begins.

Worming. Before attack After attack

Worming
AFTER ATTACK AFTER
ATTACK

Worming. Apparently mated pair. One on
pole. Other comes in flying, first with LCN's, then
11 notes. Feeds. N.E. of mated pair.

One Worming toward flying bird; (with def-
inite L.C.)

AFTER ATTACK.

♂ making little "circular flights" while alone.
Some feeding during these flights. Some LCN's. Some
attack on distant birds.

Herring

March 26,
1955

Chincoteague Marbles 6:05 a.m. Moderate
to cloudy. Rain. Moderate wind.

One herring lands beside the other. Both
O. Then one attacks. (Thus: O before attack
Bird in O attacked from O) V after attack
V after being attacked. Third bird lands. Makes
a series of L intention moves. (with M presumably)
Then in V. Then stops

"♀ Herring displays with one ♂"
She is up. Goes to another. Second ♂ in O
before she lands. Then down, either relaxed, or, more
probably, PAT or GP. ♀ in aux. V. ♀ flees up.
Circles back to second ♂. Both V. ♂ attacks
♀. ♀ flees up to another ♂ (possibly the
first) for another M.C.

"♀ Herring lands beside another ♂"
Probably mate. Probably just feeding. In any case, the
♂ doesn't display. ♀ goes into aux. V.

Apparently territorial ♂ Herring. Twice
flees up, apparently to chase juv. and/or adult in-
truders. Then, twice, lands with M notes. Stands

Heaving

March 26. II

in L, with M notes, for a minute after landing.

♀ flies to ♂ ♀ does brief O, then U-HF
after landing. ♂ does display, stands, then
makes attack movement ♀ jumps back ♂ in U
♀ probably brief O, then U, then flies off, lands in
distant communal area

Drumming

Neither Nor.

V	7
O	16
OLO	4
L	0
GP	0
Ch.	0

By retreaters or escapees

V
O
OLO
L
GP
Ch

By Attacker before attack

V	1
O	0
OLO	0
L	0
GP	0
Ch	0

By Attacker after attack

V	3
O	0
OLO	0
L	0
GP	0
Ch	0

By Attached, after being attached

V	1
O	0
OLO	0
L	0
GP	0
Ch	0

Herring Gull

Lake (still largely frozen)

April 18
April 19

25 min.

50 min.

Birds in display attached.

Display of attached.

V I

O

OLO

L

GP

Display of attached

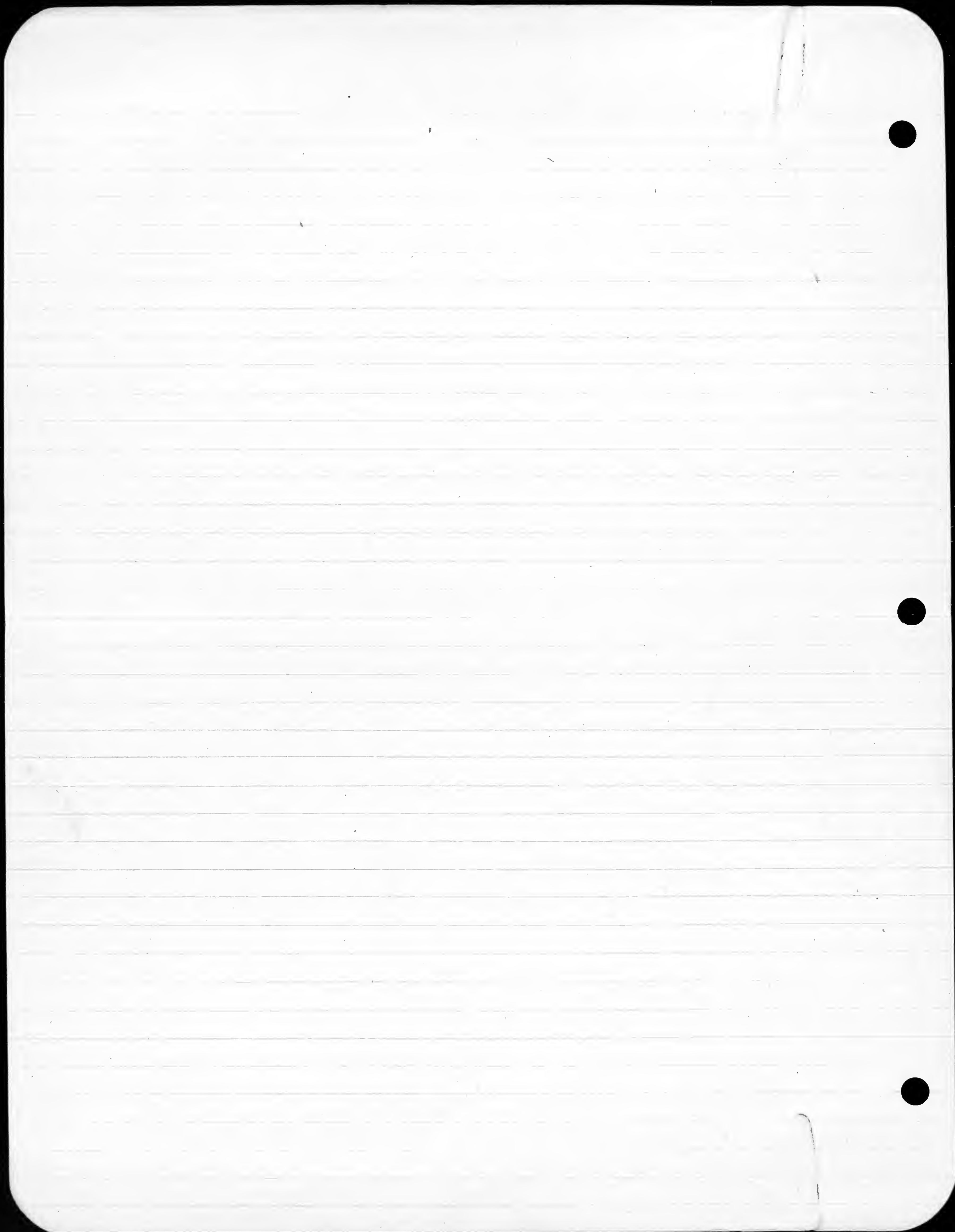
V I
O
OLO
L
GP
Ch.

V
O
OLO
L
GP
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V
O
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O
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V
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Wenung, April 24, 1954,
I.

Saturday,
April 24

Wenung Gull.
A few resting on ice

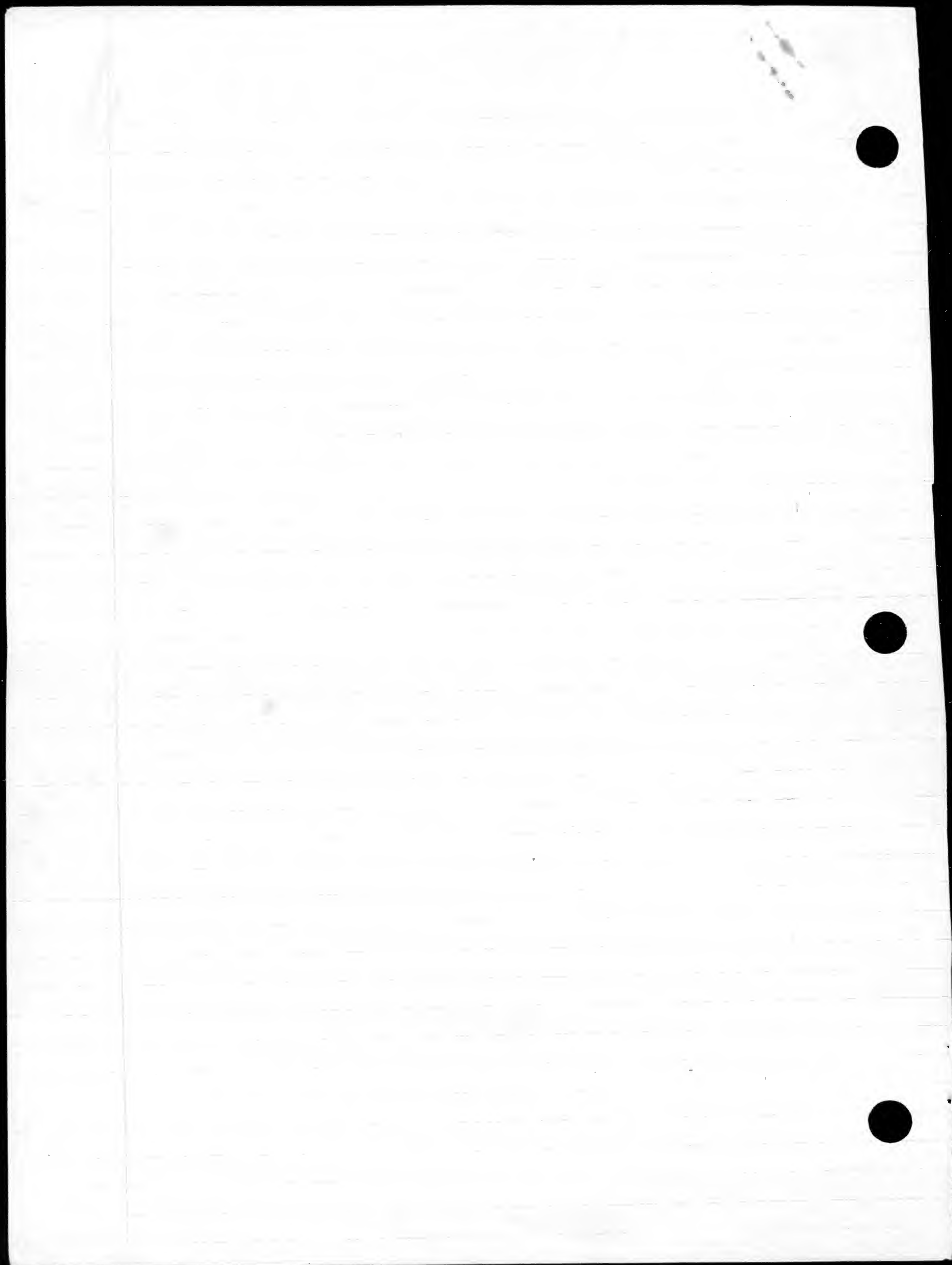
Lake Manitoba,
Delta

☒ Ch. O.O. OLO. 12:10 p.m. O.O. OLO. OLO.

~~Wenung~~

O without head-throwing

⊙ V.V.V.V.V.O. V before attack - V after attack V.V.V.
V.V. PAG. PAG. O.V.V.O.O. V after attack.



Herring, June 21, 1954,
I

Monday
June 21.

Pelican Island, Dog Lake

More Herring started 11:10. Early. Windy. Mod. to
pulls down almost clouds, but very dry

Voices during Trumpeting, all in chorus, more "melodious",
than that of the Ring-bill. Sounds as if it were coming from a
distance.

Quite a number of birds within sight, but much more
widely spaced than Ring-bills

Just a top-casern, pink. Bill yellow, on orange side, but
almost white lemon-yellow at tip. Red spot confined to throat
unmarked, bordered on top by faint blackish spot, in one individual,
but not in another. Gape angle same orange-yellow as rest of
bill. Eye same orange-yellow. Iris black. Feet yellow.
Under. Smaller, pinkish.

☒ O. O. OLD. O OLD. O O O O OLD. OLD LO. OLD OLD. OLD. OLD.
OLD. OLD OLD OLD.

Trumpet in air. Almost reproduction of ground movement.
With wing-beats, I think.



Phase 2



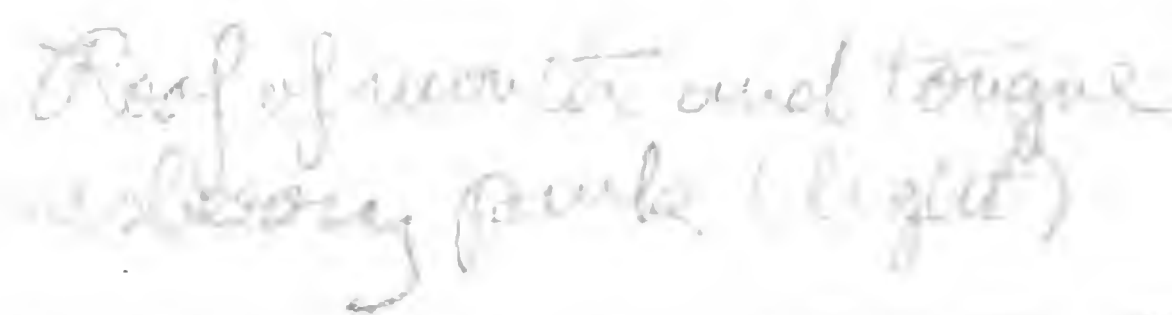
Phase 3

Birds thoroughly inert 11:50.
Paw starting 11:55

1954

That intense & sometimes violent struggle, preparatory to flying up

② $\frac{V-HF \text{ after attack}}{V \text{ before attack}}$ OLD $\frac{V \text{ before attack}}{V \text{ after attack}}$ - $\frac{V \text{ after attack}}{V \text{ before attack}}$



Skimming June 21 III
1954

Skimming Notes are more uniform than those of Ring-bill
Just few are larger (more widely spaced?) than the majority

Getting duller 3:00

Woman is much more penetrating than that of the Ring-bill

② V before attack - V after attack - Bud in V attacked -
V after being attacked V-HF after attack V after attack

June 4:15 Back?

Wednesday
June 23

Pelican Island

Arrive Skimming Colony 3:27^{PM} Very hot. Wudlers
Take a long time New-site. Buds shy

Gulls down 3:32

③ M before attack - V after attack OLD after attack
OLD V after attack OLD OLD V after attack OLD OLD M after
attack M after being attacked M-ch before attack V before attack
V-HF after attack V V L ~~XXXXXX~~

!! ~~XXXXXX~~
X OLD OLD OLD OLD OLD OLD OLD OLD OLD L L LO OLD L LO OLD
OLD OLD O O O LO OLD OLD O O OLD O O O L O O OLD M O O M LO
OLD

M obviously used, after alarm, to call back the young

Still too shy to do much 3:50 Still 4:12 Still 4:37

Still 4:58

!! ~~XXXXXX~~
OLD (V) - (HF) seem to be usual MC at this stage of the
breeding cycle. Or M & rev, of course.

!! ~~XXXXXX~~
Slightly relaxed, but very dull 5:15

!! ~~XXXXXX~~
Feeding of young without M

!! ~~XXXXXX~~
M, ch, and n b, performed by bird with half-grown

Henning

June 23 1954

chicks, at station, away from nest. M while collecting, Ch as, and after, reporting. Obvious no response in mate - for a while - then mate starts also. Obviously "friendly".

Then both move away, back then back. Start again. Starting new nest? M particularly strong on returning from collecting trip.

☒ O.O.O. OLD OLD OLD OLD OLD OLD OLD O.O.O.O.O. OLD OLD O.
O.O. OLD O.O.O.O.O.O.O.O.O.O.O. OLD LD O.O.O.O.O. OLD OLD OLD OLD.
OLD O.O.

⑥ OLD OLD O LO V HF V before attack - V after attack ~~over~~
OLD OLD OLD OLD V before attack - V after attack M M M M O. Ch.
Ch O.O. OLD OLD O V V before attack - V HF after attack V after
attack OLD.



LCN



(see previous day, after clearing)

Head-neck posture in air.



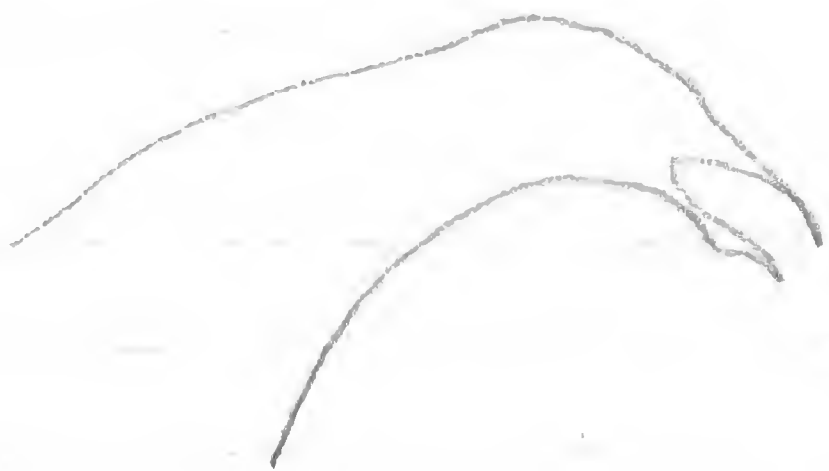
LCN

M very common by flying birds 6:19

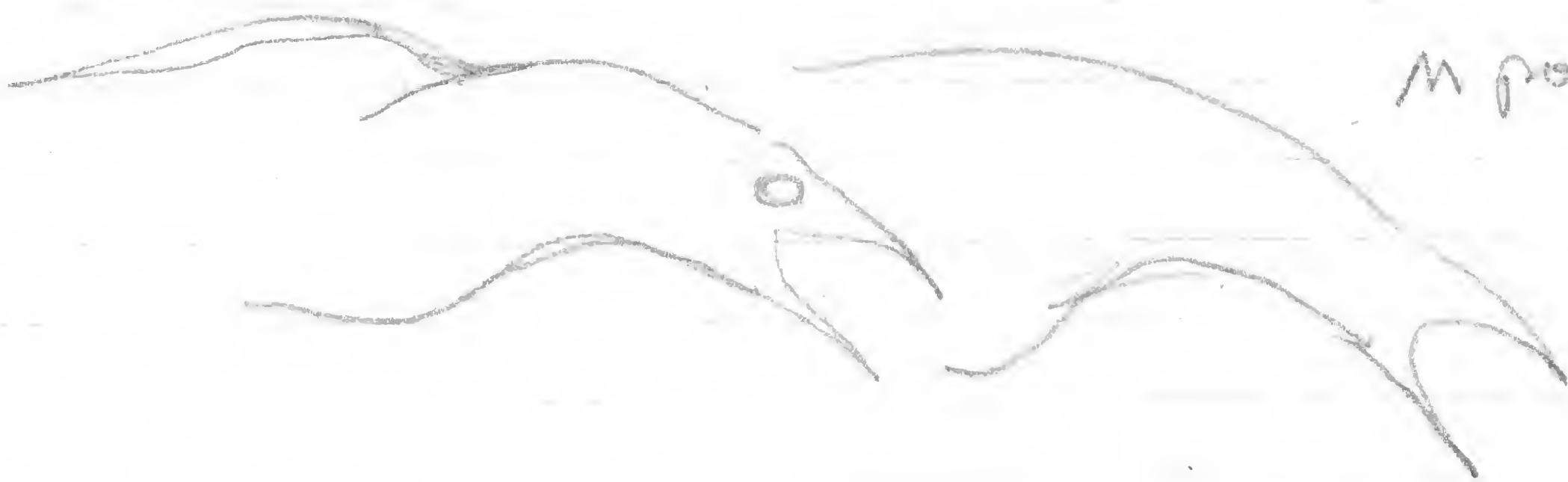
Again & again it is obvious that M is low intensity Ch.

11:00

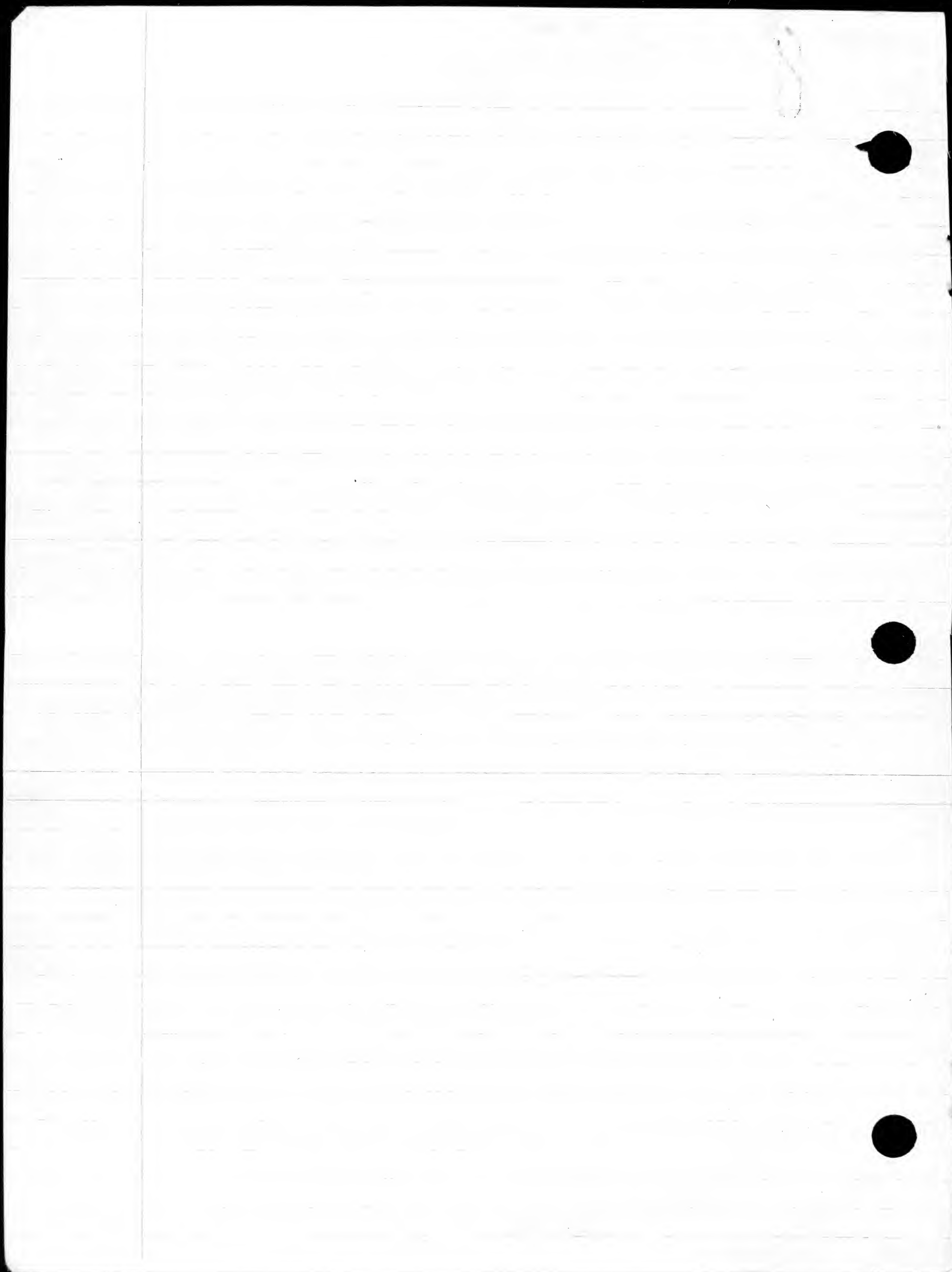
Heming June 23 III
1954



M postures on ground



M posture in air



Henning, June 19, 1955,
I

Pelican Island. Dog Lake.

Swoop - Loar performance (diagonal). Apparently provoked by me, more or less directed toward me. Just like that of the Ring-bill. Accompanied by quavering song call notes: "Pee-oo-oo" etc.

