

THE IDENTIFICATION OF WINTER FINCHES AND GROSBEAKS IN FLIGHT

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Many field observers of considerable experience have gaps in their knowledge when they come to the identification of winter finches and grosbeaks in flight. Most of the species can be recognized under these conditions, however, if seen fairly well, especially if one knows their characteristic flight calls. All of them have a markedly undulating flight, conspicuously-notched tails, and a blunt look at their front end because of the stubby bill.

Evening Grosbeak

The Evening Grosbeak is the only bird of its approximate size so stocky and short-tailed that also has a very bouncing flight. Woodpeckers come closest, but even they are less stocky. The Grosbeak's large white wing patch is usually very conspicuous and verifies the identification. The commonest call note is surprisingly like the common chirp of a House Sparrow, especially when heard at a distance, but it is louder and more ringing in quality. It may be written variously as "chree-u," "klee-a," or "jreep."

Purple Finch

The Purple Finch is easy. One needs only to hear the diagnostic call note which can nearly always be heard when a Purple Finch flies over. It can be variously worded "tsurk," "tik," or — my own preference — "turk." It is very short and sharp, but not loud. It is a rather clear hollow whistle, like blowing sharply into a small, empty rifle cartridge. Of all the species discussed here, this is the least gregarious and is the one least often seen flying in flocks.

Pine Grosbeak

The Pine Grosbeak on the wing is easily identified by sight alone if its approximate size is judged correctly. It is the only winter or late autumn bird which is very nearly as large as a Robin, with the same tail-to-body proportions as a Robin, and which bounces when it flies (except for the quickly distinguished shrikes). It is commonly seen in rather small, loose flocks or groups, but is also often alone. The flight call is characteristic. Most commonly it consists of one to three notes that may be variously worded, for example, "see tyer," "ee tyi," and "ee tyi tyer." This call has a clear, musical, though very slightly squeaky whistled tone, easily imitated by whistling these syllables in a high pitch. It is often said to resemble the call of a Yellowlegs, but it is not likely

to be confused with one because the Grosbeak's second note is nearly always on a clearly different pitch from the first note (usually lower), the call seems less loud than that of a Yellowlegs, is much less forcefully emitted, and is sweeter in tone. It resembles more closely the flight calls of Goldfinch and Horned Lark, though it is not nearly so thin and squeaky as the latter, and sometimes it can be mistaken for the notes of one of these two species, especially at a distance.

Redpolls

A flock of Redpolls averages considerably paler than a flock of Siskins, and grayer than Goldfinches. The rest of the finches are larger than these three. Also there is typically a very noticeable difference between the whitest and darkest individuals in a Redpoll flock; noticeable variation of this kind is lacking in winter flocks of the other small finches. A Redpoll's tail is considerably longer and a little narrower than the tails of the others. This is apparent under most conditions and with practice can be used as a means of identification. The persistently repeated flight call is the means by which most Redpolls are discovered and recognized, however. It may be syllabified variously as "chyu," "chi," or "chyer," and is usually given in groups of one to four or more staccato notes, at the rate of seven notes per second. The quality is primarily "chichy" (like saying "ch" in a loud whisper) and metallic (in this case, like hitting a bare telephone wire with a stone), with only a slight whistled quality. (See Pine Siskin and White-winged Crossbill.)

The *Hoary Redpoll* cannot safely be distinguished in flight.

Pine Siskin

The Pine Siskin is like the Goldfinch in size, shape, and flight. Sometimes the long, pale yellow stripe in the wing can be seen as Siskins go by; if it can, this is diagnostic. They often form a tighter flock than Goldfinches do. This species has two kinds of common flight calls, one or both of which may be heard from a passing flock. The most distinctive one usually consists of two or three syllables very rapidly run together, so that the call is from about one-tenth to one-quarter of a second in length. The tone is a combination of nasal and sibilant (having an "s" sound) and is given with considerable emphasis. Some variations and syllabic interpretations are: "swee-a" (one of the commonest calls and one of its best syllabications), "see-i" "cheese," also three-syllabic "chsiwee-yi," "tsiteeyi," "chitilit," and "tsyu-wee-yu," *all these sounds always nasal and sibilant throughout*. The accent is usually rather evenly distributed over all the syllables. A bird repeats this call every few seconds in flight. It is completely diagnostic.

The other common flight call of the Siskin somewhat resembles that of the Redpoll. It may be written "tyi," "chyu," "chi," or "jit." It has a *decided nasal or whining tone* and slight but noticeable amounts of "chichy," metallic, and sibilant tonal factors. It is reminiscent of the call

of the Brown-headed Nuthatch. There are usually two to five notes in a group, given at the rate of about seven notes per second. Sometimes a series rises slightly in pitch throughout. It is readily distinguished from the similar "chichy" calls of Redpoll and White-winged Crossbill by the very prominent nasal or whining tone factor.

American Goldfinch

The American Goldfinch sometimes has to be identified in winter by visual means alone. When this is the case, it is very commonly misidentified as Pine Siskin. This may be because some birders may not be accustomed to thinking of Goldfinches as dark-looking birds, as they are in the winter. Or, it may be that these birders think of Goldfinches as inseparable from their typical flight call — as they are during late spring and summer — so that in winter when they see a flock of small dark finches flying silently or emitting only an occasional single weak note, they assume that they cannot be Goldfinches and therefore have to be Siskins. The fact is, on the contrary, that a flock of winter finches flying silently or with only an occasional scarcely audible note or two is more likely to be a flock of Goldfinches than anything else. A zealous and experienced use of binoculars on a flock of finches in flight will often reveal identification cues that a person might not expect could possibly be seen under the circumstances until he tries. Birds with undulating flight fold their wings against their body on the down-glide and then may show the same field marks they do when at rest. Thus, binoculars sometimes reveal the unstreaked bodies of flying Goldfinches. Since Goldfinches tend *on the average* to fly at less height and in less compact flocks than the other dark winter finches, one can make a tentative identification using these characteristics, preferably in combination with some others.

The usual syllabication, "per-chic-o-ree," for the Goldfinch's typical flight call is unnecessarily inaccurate and misleading. "Ti-tee-ti-ter," or "tyityee-tyi-tyer," using the "y" to indicate the quick down-slur in each note, would be an improvement. The second note is usually the highest in pitch and sounds very slightly louder than the others. There may be from one to seven notes in a group, most typically four — though, as a rule, fewer in winter. This call always has a sweet, musical, plaintive quality, unusual among flight calls of finches (but see Pine Grosbeak). In the late fall and winter, Goldfinches do not seem to have quite the spirit that they do in warmer seasons, and at this time a Goldfinch often calls much less loudly and frequently, tends to give fewer notes in its call, and may even fly past without making its call heard at all. On cold winter days I have often seen a flock fly close past me and have heard only a single weak "tee" or a scarcely audible two-note "tyi tyee," most members of the flock remaining silent. Such calls as may be heard, however weak or abbreviated, still retain enough of the Goldfinch's sweet, musical, plaintive quality to be readily recognized.

Red Crossbill

The Red Crossbill is so lacking in distinctive field marks that can be seen as it flies, and its flight call is so constantly given and so completely diagnostic that one not only can, but in most cases must rely on recognizing this species in flight by its call. The note is usually syllabified as "kip," "jip," or "pip," but no syllabication represents the sound adequately. Only an unusually good ear will detect that some individuals slur the note downward, in which case "chyip" or "tsyip" are fair interpretations, and others slur upwards, for which the syllabication might be written "quit" or "prit" ("preet" when a little higher pitched). The staccato notes are unusually emphatic and loud for so small a bird, the force with which they are voiced being one of the most distinctive characteristics. Authors generally avoid describing their quality. This says a good deal about the quality, however, because the fact is that it differs from any bird sounds that do possess clearly describable tonal characters. To step in where angels fear to tread, I might venture the description that the note is a very forcefully-delivered staccato whistle, its musical tone considerably reduced by a sibilant element and a slap-like factor. This description probably does not create a vivid sound-image in the mind of a reader. Perhaps it is best to advise learning the flight calls of all the other finches and to remember simply that the quality of the Red Crossbill's is entirely different from any of them. The rhythm is similar, however, the notes typically being given in groups of one to five or more, at the rate of four or five notes per second, with intervals of about half a second or more between groups.

White-winged Crossbill

The White-winged Crossbill may often be recognized in flight by the very conspicuous white wing bars combined with size and shape of the bird. Also, the bright pink color of the adult males in a flock is frequently visible at some distance.

Like the Siskin, the White-winged Crossbill commonly uses two very dissimilar flight calls, either or both of which may be heard as the bird flies overhead. Both are very different in quality from the Red Crossbill's call. One closely resembles the flight call of the Redpoll. It may be variously syllabified as "ch," "chi," or "chit." It is given at the rate of four to six notes per second, with one to four or more notes in a group and usually less than a second between groups. In quality it is a somewhat metallic "chichy" sound with a peculiar resonance. It differs from the Redpoll's call chiefly in being repeated at a speed between four and six (usually five) times a second instead of seven, in being less metallic, and in sounding louder and fuller or heavier like the note of the larger bird that it is.

The other note, a somewhat nasal and metallic whistled "wheent," "whing," or "we," closely resembles the common "pink" call of the Bobo-

link, but is quickly up-slurred, giving it a definite "w" or "wh" sound, and is enunciated with greater emphasis. Like the "chichy" call, it is given singly or in groups of notes. No other finch has a note at all similar.

In learning to identify winter finches and grosbeaks in flight, the most important factor is field experience with them.

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FOOD HABITS OF THE CROW

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The Common Crow (*Corvus brachyrhynchos*), adaptable and aggressive, has flourished in the United States since the coming of civilized man. Called a maize thief by early settlers it has long been condemned and persecuted for its damage to crops. In the absence of legal protection the crow, wary and intelligent, is able to hold its own. It is known to almost everyone, and may well be called the "All American Bird."

Dietary habits are in part responsible for the success of the crow. It is omnivorous and anything edible whether animal or vegetable in origin is considered food. Studies of the stomach contents of over two thousand crows reveal that no less than 650 different items of food are eaten. Add to this a strong, all-purpose bill and a rugged digestion and the elements of survival are present.

Food habits studies of the crow have been made for many years, often to gain information on economic status. Three methods are used: visual observation in the field, examination of stomach contents, and a study of pellets, since the crow ejects inedible material in the same manner as hawks and owls. One winter more than a hundred years ago Thoreau collected crow pellets at Concord and examined them under a microscope. In his words "they consisted of seeds and skins and other indigestible parts of red cedar berries and some barberries." A more recent study showed that in severe winter weather, when food is scarce, pellets contain no digestible material.

Although the crow is naturally carnivorous, being fond of meat and fish, animal food normally comprises less than one-third of the total intake. Large amounts of vegetable matter are eaten when animal food is not readily obtainable. Stomach analysis has revealed the presence of considerable mineral matter, particularly in cold weather. Although it does not possess a true crop, the crow utilizes sand and gravel as needed to break down hard grain and seeds with hard outer shells.

A New York State study has been made of specimens collected throughout an entire year (Paul E. Hering, *Auk* 51:470-476, 1934). Four hundred and sixty-five crows were taken in five counties covering approximately a radius of fifty miles from Ithaca and stomach contents