AUTUMN IN NEW MEXICO

In September the birds begin to come down from the mountains. Each morning my wife and I walk out into the pinons and junipers behind our house to watch for them and to see the wild flowers. It had been a wet August this year with almost daily rain storms right up into September. Flowers are everywhere like a second spring, and as in spring birds are singing. One calls with a sweet clear note - a single flute-like note - again and again. After a lapse of all the summer months spent on a New England Island it had become an unfamiliar sound to me. I do not remember the note and I cannot find the bird, for I am blinded by the morning sun just rising over the western foothills of the Sangre de Cristo range. Other birds answer the call from the top branches of the low pinons and junipers, but their silhouettes are indistinguishable from the bushy outlines of the trees in the sharp morning light. Then one begins a soft, melodious, warble, which I have heard high in the mountains in June, not unlike the bluebird's. At once, like a shaft of light in a darkened room, a bright illumination stirs sudden recognition in the back of my mind and I remember the Townsend solitaire. I confirm the identification when finally I get a good look at the bird and see it fly.

Solitaires are well named. They haunt the grassy tops of the mountains where forest fires long ago destroyed the trees creating open, alpine slopes. They nest in June and July on the ground under the shelter of a rotting log or projecting slab of rock. When their families are grown and dispersed they move down from the boreal mountain tops to the desert foothills of sage and pinon and cactus there to pass the winter.

The solitaires sing in unison in autumn to confirm a kind of mutual interrogation: Here am I, where are you? But the insistent question that comes to mind is why, after all, do some birds sing in the morning sun on a September day. The reason cannot be that they are announcing claims to territories at this time of year, the usual explanation given for the singing of birds in the spring. The song must have a deeper meaning. They sing I believe to the glory of the day, to the sun from which all life flows, to the end of the perils of darkness. To the scientist, however, sun worshiping is an unacceptable mystical whimsey when imputed to humbler creatures less intelligent than he. He has proposed what he considers a more logical explanation for the singing of birds in the fall. He says that the cycle of behavior, which begins with the start of the true year - the rebirth of life in the temporate zones - migration,

song, and mating is a response to the increase in the intensity of light from the sun as the earth swings around the ecliptic, and that in autumn when the light is failing it passes through the same intensity that initiated the cycle six months earlier. September, he says, is a false spring to which birds respond, but to a lesser degree, as they did in March and April to the real spring. Maybe a cold scientific truth rests in this explanation, but it does not account for bird song throughout the winter months, for the dawn and dusk plaintive whistling of white-crowned sparrows in the willow thickets along the irrigation ditches where they roost for the night. And when the solitaire sings at noon during a January thaw, whether he sings in praise of the sun or because he feels its warmth, as he does after the vernal equinox, is a distinction of little moment. Why shouldn't he be a sun worshiper? We humans are all sun worshipers - we have no choice. The physicist who works to harness the energy of the sun with his thermo-nuclear fusion device is one in a very practical sense: He hopes to free mankind from the limitations of his very finite planetary home by setting up a tamed and docile piece of the sun on earth. He is mystical too when he talks about time, space, position, and velocity in the finer structure of matter. When science reaches beyond

the gross phenomena of nature, beyond description and classification of events, and attempts explanations it soon enters a realm of ultimate meaning and metaphysics where distinctions become hazy and the difference between subjective and objective is confused.

The solitaire is not alone in voicing his praise of the day. The house finches also sing from high perches on television aerials, their red throats glowing in the sun, and western meadowlarks gurgle in the brown, seedy fields, invisible among the dead stalks. Robins too sometimes sing in winter on days when the sun is warm, when we as well are deceived by a false sense of optimism into believing that, contrary to rational expectation, spring is about to burst upon us.

The other birds who first appear in the fall are those driven from their cool summer homes in the high altitudes by freezing weather. Some, like the all cerulean mountain bluebirds, are forced down by the requirements of their insectivorous habits. They come in search of dormant pupae, the eggs and resting stages of insects, and the spider's silken egg cases which they glean from the junipers and pinons; and they come for the winter berries of mistletoe and juniper. I have watched a robin, one of the largest thrushes, deliberately eating one by one the berries from a loaded juniper branch.

They seem on ripening to be a hard and unpromising diet, but after the first frost become soft and succulent. Other birds are attracted by the seasonal abundance of wild seeds. Juncos and white-crowned sparrows feast on the millions of tiny seeds of the chamisa or rabbit bush which grows in such abundance in the arroyos where at the end of summer its golden plumes transform the landscape. Clark's nutcrackers make their appearance in late September when the pitchy pinon cones begin to unfold revealing the brown nestled fruit inside. Pinon nuts are a natural food for men as well as birds and in good years lure hundreds of Indian and Spanish-American nut gatherers out into the pinon forests with their pails and baskets. Along with the nutcrackers other avian harvesters are the Steller's and pinon jays. The former like the Clark's nutcrackers are solitary birds that make their presence known by grating raucus calls. Both birds prefer to feed on the topmost cones of the pinon pines where among the upper branches they are easily recognized. The Clark's nutcracker is a stocky gray bird with black and white wings and tail, and a long black dagger-like bill. When it flies the white tail feathers and white patches on its wings are very conspicuous. The Steller's jay on the other hand appears to be black unless seen in very good light, which reveals its dark blue plumage, has a short bill and a high

pointed crest. The voice of the Steller's jay consists of a series of harsh chopping notes in contrast to the single or double rasping call of the nutcracker.

During the greater part of the year foraging bands of pinon jays roam the low foothills and juniper flats. The breeding season for these birds is variable and may extend in New Mexico from March or even February throughout the spring and into the summer. That is not to say however they nest repeatedly, for they raise but one brood a year, at a time determined presumably by the abundance of food. Pinon jays nest in loose colonies of no more than a few pairs up to several dozen on the juniper-pinon mesas and flat lands that surround the mountains, and on the high plateaus of the arid west. After the young have fledged and are able to look after themselves they begin to move about in groups of all ages in search of food, and these groups gradually coalesce as winter approaches into flocks of several hundred. When September comes around these flocks are already well developed.

At this time of year: The time in New Mexico of the fall blooming which I have called a second spring, when the arroyos between the ridges are filled with a great variety of yellow flowering, herbaceous plants and shrubs, and masses of purple asters - a golden time of year - one

first becomes aware of the flights of chattering jays. They appear unexpectedly near my house like an undisciplined troop of bandits, clucking and mewing and cooing to one another in monotonous communication that acts to cement their leaderless confederation into ragged coherence. They alight in the cottonwood trees cawing noisely while they look the place over with crowlike curiosity. They have been here before and will return again when natural forage becomes scarce, but they do not dain yet to approach my feeder; its contents are not to their liking. On a sudden unanimous impulse they all take off in a straggling flock, still conversing, and fly away.

Although the behavior of pinon jays relates to the seasons, they are nonmigratory birds, not even changing their habitat to the extent that nutcrackers and Steller's jays do who travel vertically with the seasons between the high mountains and the foothills. In this respect they resemble the scrub jays Woodhousei who live all year long in the juniper-pinon association. These four species are members of the crow family but they belong to different genera.

As the weather becomes more frosty with the approach of winter, bluebirds begin to appear. There are two kinds: the mountain bluebird, all cerulean, who

commonly makes its home among the firs and aspens at the same altitude as the solitaire, and the western bluebird similar to the eastern but marked with chestnut on its back as well as on its breast. The bluebirds travel in groups and small flocks that stay together and are easily recognized by gentle piping calls, a peculiar manner of flight, and a wing flicking behavior characteristic of the solitaire and other thrushes. Like the eastern bluebird its western counterpart nests in hollow trees, using the old holes of sapsuckers in the absence of natural hollows. In the valleys they also are particularly attracted to run-down apple orchards where they find an abundance of nesting sites. At higher elevations the mountain bluebird uses the holes in aspens made by the Williamson and red-naped sapsucker, but when these sites are scarce they too will use other cavities. Once I found a mountain bluebird nesting well below its usual altitude in a hollow in an adobe wall under the eaves of a barn, and another time I found one building its nest in the deserted burrow of a ground squirrel dug into the steep side of an arroyo.

In the spring when nesting begins bluebirds and scrub jays have acquired their brightest plumage. The mountain bluebird, ethereal, azure, is a being who partakes of the sky, his wings and back belong to the zenith, his belly to the

pale transluscent horizon. The ~~lighter~~ blue feathers of the jay are more opaque, tinged with gray and brown. The blue of the male western bluebird, however, has been transformed into a vivid ultramarine that contrasts strinkingly with the chestnut on his breast and back, from which his other common name, chestnut-backed bluebird, is derived. The two names, in fact, apply to slightly different sub-species. The purplish blue of this bird flashes more in the sun than the color of the others which seem to blend with sky and shade. All three of these birds undergo a postnuptial molt in the summer which requires several weeks for completion. The new plumage is grayer than the old, more somber. Mountain bluebirds are slaty blue following this molt and the sexes less easily distinguished and more like the juveniles. In the fall the western bluebird is quite drab; the vivid blue has disappeared and the chestnut on the back has darkened though in good light a brown wash can still be seen. The scrub jay is less effected by its summer molt although it too becomes noticeably less brilliant. Since no molt of the adults occurs in the spring, the more conspicuous spring plumages are acquired by a wearing down of the duller colored feather tips that conceal the intenser blue of the overlapped parts. In other words the transformation is gradual

but unnoticed until we begin to feel spring in our bones again and the freedom offered by the changing events in nature brought about by the cycle of the seasons. Every year the same thing happens; people open their eyes in the first warm wave and emerge from mental hibernation. They look around to see what has been going on while they were asleep, and if they happen to notice a robin they think it is the first one freed like themselves from winter exile, not realizing they have been here all along. The bluebirds who appear so fresh and newly clad when we notice them first on those early warm days are in fact dressed in their old tattered clothes of the year before.

Occasionally flocks of strange birds appear in the cottonwood groves along the water courses that drain the western slopes of the Sangre de Cristo range of northern New Mexico. They come unexpectedly to stay a few hours or a few days and depart without forewarning and with as little announcement as characterized their coming. The least infrequent visits are those of the evening grosbeak, a bird of curious unpredictable habits. The migration routes, the breeding grounds, and the wintering localities of evening grosbeaks are constantly shifting. They may be abundant one year and absent the next, or they may come and go during the same season,

especially in winter. They seem to prefer the coniferous forest for nesting, either high in the mountains in the west or among the firs of northern Michigan, Minnesota, and Canada, but even in this they are not consistent. In New Mexico where I live the first intimation of their sudden arrival is often the sound of chirping, like a multitude of English sparrows, coming from the tops of the cottonwood trees. And then I see them perched on the topmost branches in large numbers, where, if they have come in the dead of winter, they simply sit for hours conversing among themselves. Although in winter they seem to do nothing but talk, if they come in the spring after the sap has begun to rise they feed on the swollen leaf buds, but never cause appreciable harm to the trees. They usually are not interested in the bird seed I put out which attracts other birds in large numbers. However, one year a big flock stayed around for weeks, confirming their unpredictable habits, eating enormous quantities of cracked corn that I spread on the driveway. Sometimes evening grosbeaks appear at sunrise to drink from the pool I keep unfrozen all winter with an electric heater. At these times they can be seen to best advantage and the differences between the sexes easily discerned. I do not consider the evening grosbeak a very beautiful bird, and readily confess to a lack of

impartiality. The plumage of the male has a garish, incongruous, unplanned extravagance about it. The feature that contributes most to the startling appearance of the bird is a massive, greenish white beak like the artificial whitened face of a clown. Across his forehead above the bill a band of lemon yellow extends back over his face as a superciliary stripe. The crown is black and the feathers of the neck, throat, and cheeks are dark olive brown fading into olive yellow on the back, sides, and breast. The tail and primary wing feathers are jet black, but as though ordered by a capricious after thought all the secondary wing feathers are immaculately white. When the bird is perched these large white patches and the gross, light-colored beak are its most conspicuous markings. The female grosbeak is much less gaudily dressed; her dark head without the yellow blends into a soft, silvery body gray, shading to lighter gray towards her tail which abruptly is a much darker gray as are her wings. The white is less clearly defined, but her bill has the same naked whiteness as the male's. Evening grosbeaks look like aggressive birds and their looks do not belie their behavior. When they come to drink in the morning they drive away all the robins, who are accustomed to drinking and bathing at this time, by belligerent actions, and they even attack one another in their dog-in-

the-manger eager aggressiveness.

A less common visitant, and the only other bird of equally erratic behavior, that travels in wandering flocks through the winter months is the Bohemian waxwing. A large flock mysteriously materialized late one winter a few years ago in our Chinese elms and cottonwoods where it remained for several days feasting on the winter buds. The number of waxwings in and around Santa Fe must have been very large for they were reported simultaneously by many observers. The Bohemian waxwing unlike its smaller relation the cedar waxwing is confined generally to the western states. They breed in the boreal forests and roam widely over the Rocky Mountain area throughout the rest of the year. Both kinds of waxwings are sleek, fawn-colored birds with neat, unruffled, pointed crests. The former is the darker and differs also from the latter in possessing white wing markings and rusty undertail feathers. The presence of red wax-like tips on the wing feather margins is not an invariable attribute of either species. On this occasion, as has usually been the case with the grosbeaks, my attention was first drawn to the waxwings by their voices. I heard overhead a continuous sibilance such as I imagined a swarm of very large and noisey gnats could make, and on looking up I saw the trees covered with birds. At first I thought they were cedar waxwings but the sound was too rough for

them; it carried a hoarse, grating timbre as though the birds had all caught cold at once. As I listened I realized that unlike the clear monosylabic ZEEE of the cedar waxwing the notes I was hearing were composed of two syllables ZEREEE, the first very short. With field glasses I noted immediately the white on the wings and the rusty feathers under the tail, which could clearly be seen from below, and know on that instant they were Bohemian waxwings although I had never seen one before.

With the warming of the days as spring advances the house finches begin to sing in earnest and to investigate all their favorite nesting sites - the lamp by the front door and the open Mexican bird cage that hangs on the wall under the west portal. These preliminary signs of courtship and pair formation are always premature; they are the first early manifestations of that restless eagerness tempered by a relaxation of tensions which in us we call spring fever. Nest building by the house finches will not seriously begin for another month. The trilling of plain titmice is another sign of the imminence of spring as they explore cracks and crannies and broken down woodpecker holes with an eye to setting up housekeeping. But not until the Say's phoebes miraculously appear and begin their frantic courtship, trilling sweetly in unison as they practice fluttering seduction around and

in the portals, are you assured you have seen the last of the cold weather. And on that day on which you hear the rattle of hummingbird wings rending the air and know the blackchinneds have returned is your confidence confirmed that finally warm days are here for good.