1 Det- beartel Muthold

A bird that has been a resident on Great Spruce Head Island for as long as I can remember - never abundant but always present in small numbers - is the Red-breasted Nuthatch. The name is misleading ; how misleading I did not discover until recently I had the opportunity to photograph and oberve the bird closely. The most that can be said is that the underparts of the male, more than  $\delta h$  the female, are washed with pale build buff. The color is distributed non-uniformally from the throat to the noticalle under tailcoverts with especially emphasis) on the bird's flanks. Of course Thus description is based on the close observation of only one pair of birds, species but if the/ can legitimately be considered red breasted the designation distinguishing it must be accepted as weakly wis/inclive from its larger white breasted relative. There are other more characteristic field marks than this: the white stripe over the eye for one, and small size, and the usual squeaky nasal calls higher-pitched than the yank yank of the white-breasted nuthatch. For many year ad for may have I spent many hours for years in the spring and summer hunting (of past years) in vain

a pair of for the nest of a Red-breasted Nuthatch. So I would find /he birds time and again feeding together, chittering and anking back and forth in their habitual affectionate behavior towards one another, but never was I able to track them to a nest. They always eluded my pursuit by disapperaina into the spruce forest or suddenly flying away over the tree tops. Not until 1969 did I succeed atlast and then only by the fortunate concurrence of in late May circumstances. I started looking early that year/before they could possibly have started to nest. Several pairs had already arrived on the Island and could be observed as they jerked along the branches of the larger white birches feeding and courting and carrying on a steady flow of in particular different nuthatch conversation. One pair/I watched for many minutes on several / metamorphosed occasions working over a large white birch for dormant and newly amorgedinsect life. The tree seemed to have an especial attraction for them

because they returned to it again and again over the course of several days, and I began to wonder whether their interest centered primarily on the insect life the tree provided or was conveniently near their nest site. I ruled out the birch itself as a nest site since it was seemingly healthy and free of dead wood. The male bird was very busy engratiating himself will to his female companion, whom he returned to at frequent intervals with particularly succulent morsels which he placed in her open bill. She would cease her own foraging as he approached and with quivering wings and upraised head assume the juvenile begging posture. All the time this wenton they both were making conversational chitty sounds. The attentiveness of the male is so unremitting that it is touching to observe. He seems to try by doing everything within his powers to please her, feeding being only one aspect of his solicitude. One day I came upon both birds exploring the cavities made by woodpeckers in the still standing, branchless and decaying trunk of a balsam fir. They crept around the trunk poking into the holes of which there were five to six excavated only an inch or two into the trunk. In one, however, we deep enough to conceal a nuthatch the male spent a long time digging out /s. He would disappear inside for a few seconds, reappear with a large chip in his bill which he dropped outside, and then go back for more. Eventually his mate came to inspect the work, peered in, bobbed her head inside a few times and flew off. The site was apparently not to her liking for I never saw either of them there again.

A few days later in the same general locality, for which reason I assumed they were the same pair, I found two nuthatches working on a dead birch stub about twenty feet tall that had broken off at the base and had fallen against a spruce tree growing a few feet away. Most of the shallow bark had peeled off the stub and near its top were several/downy woodpecker holes. In two of these separated vertically by a little more than a foot the nuthatches were busily at work.digging out wood from the interior. As each bird chipped away inside only the tip of its tail was visible.

Every few seconds it would back out to drop the chips putside. The male bird worked intermittently on the upper hole and the female worked alternately on both but concentrated most of her efforts on the lower one. her mate. Who She was much more persistant than / , He flew off from time to time to resuming his forage and would always metuin with food which he would give her before his excavating. mote. Both holes seemed to be equally deep andit was impossible to predict which one-if either-would become the nest cavity. No pitch was smeared around the edges of either hole, but this practice typical of red-breasted nuthatches may not begin until excavation is completed or possibly egg laying has begun. This habit of Working an unfinished diggings Woodpecker holes that I have seen carried on throughout the month of June, I have observed with and it abortive by otherpairs of nuthatches/seems to be an/activity related to pair XXS of nest XXXX construction. When I did ultimately find a nest the entrance indicating that diameter was much smaller than any of these woodpecker holes as, strongly/ from start to finish the /entire excavation/had &X&XXXX been made by the nuthatches, and was not an adaptation to a pre-existing cavity. there they As seems to be the way it usually happens, bird's nest discoveries occur when one is least expecting it. Often when I am concentrat= the find ing on finding the nest of a particular kind of bird I turn up with something quite different that I did not even have in the back of my mind at the time. tor That one does unexpectedly find these nests/reflects on one's state of alertness when and activity in the bird world can be dismissed without injoit XXXXXXXXX taking the chance of baving a significant event pass unnoticed and min molin a number of missed. Such was the situation when I found the for magnolia warblers nuthatch nest. (In July 3rd I was hunting/through the new growth of evergreen forest seedlings and young birches which were filling the/vacuum created by a blowdown several years before. Most of the fallen trees had been cleared for fire wood away/right after the storm that leveled them, but the survivors of the blow

still stood in scattered clusters or as solitary mementossof the forest that had disappeared. Tall, slim, and branchless below the high evergreen crown they held to a precarious footing, having lost in a powerful gust of winter wind, bong ago, the collective support afforded by their neighbors. They had, however, acquired a new importance in the scheme of things by providing an ideal habitat for the olive-sided flycatcher, a bird that prefers the lofty perches left behind by the wreckage of a coniferous forest, and that builds its nest in the top foliage of these stark sentenals. announcing their presence with their triple nesting call, pep-pep-The flycatchers were/tpeps on this day in July as they had been doing since early spring and every year since the blow-down occured. I found their nest several years ago and photographed the birds, but it wasn't easy. stood A few gaunt remains of trees also still/in this natural clearing: forty or more feet tall, whose scaling barkastill clung topless / dead, sbrokenbtrunkss/ubs whose tops had fallen, leaving thirty feet of shaggy bark clinging, between the stubs of branches, to fungus softened wood the the favored nesting sites for brown creepers. I was standing waist deep in a tangle of young balsam firs and raspberry vines near one of these skeletons when a small bird flew straight and purposefully to it alighting the M M Wor f near the top. I wondered about a brown creeper, but they generally hitch which till their way up a trunk from below and flyloff from the top. I didn't see from light in where the bird went the bird until it suddenly flew away. On examining the tree foot by foot with my binoculats bit found no sign of a creeperis neat. Then the bird returned and I was able to keep it in view. It was a red-breasted nuthatch, and it worked its way down the tree on mys side until it reached a black spot, which I had mistaken for a knot, and there still above this hole it paused, the head of a small gray bird appeared and received Armorsel ofrfood from the sell of the lofed of above that bear garrying

in its bill. The bird that brought the food was clearly a male, and the one inside I mistook for a juvenile. For some time I watched this feeding process wondering where the female was, and thinking that the young were

advanced that it would be hopeless to try to photograph at this nest for the disturbance of building a scaffolding for the camers would surely cause them all to leave. But then after one of the visits by the male, the bird inside came out, looked around, and without hesitation flew away. This was no juvenile, but an adult bird, in fact, the female whose whereabouts had puszeled me. Now I realized that the breeding cycle was not as far advanced as I had feared and that the nest contained either eggs or very small young.

The entrance hole was much smaller than I had expected judging by the woodpecker diggings XXX with which the nuthatches had been so But, of course, the red-breasted nythatch is much smaller engrossed in June. than a downy woodpecker and would not require nearly so large an opening. The bark around the hole, I now saw was smeared with globules of shiny pitch to which bits of exerting material straws and lichens had become stuck, in all probability some of the nesting material the birds had brought to use for the lining of the cavity. Another rather surprising feature was inder of being the nearly rectangular shape of the opening, pet/almost exactly circular as are woodpecker holes. The sight of thepitch excited me as do the first personal confirmations of well authenticated, but up to then never experienced, phenomena, such as the first telescopic view of the rings of Saturn, the green flash at sunset, 'an exploding methor, or witnessing the emergence of exteriences arouse a moth from its cocoon. These first/ a sense of justification for the doubt aweres and /we that the incomprehensible events in nature cause one to described Wonder that what others have /aid is indeed so, and skepticism about feel. ought the interpretations of these observations.

After a short while the female returned without food and entered the nest where she remained. It now seemed most probable that she was affecting incubating eggs, and that the male bird's/faithful devotions in bringing hubil diligentefaithfulness of the male bird in providing a constant supply of 'het food for bis mate was a continuation of \*MM his devotions during the courtship

period. His steadfastness was the most affecting characteristic ofhis behavior.

The height of the nst as later measured was 28 feet. There being because of no nearby trees, and the shakyness of the nest tree itself, required that to photograph the birds an independent tower would have to be built. This with the help of my son Stephen I did, cutting slender spruce trees for poles and scrounging all the scrap lumber we could find . When completed the camera on its tripod was level with the nest hole and could be set at a distance of three to four feet away. Building the tower seemed to disturb the birds very little, and when completed I sat on the small platform to test their reaction to my presence as well so close to the nest. In a remarkably short time the male nuthatch was feeding the female as though I simply did not exist. Setting up the camera, and especially the lights. caused an additional short period of adjustment on the part of the birds, but these, they quickly accepted tee and from then on ignored. I took all photographs, with the exception of the first #two or three, while sitting beside my camera. Once, A tester the reation of the male when he returned with food by place of my han d over the hole. He tried to poke through between my fingers. During the last of the incubation period and repeatedly after the eggs had hatched I took many pictures, but  ${\cal X}$  never saw the young because I had to leave Maine befor they fledged.  $ar{V}$ They(apparently) stay in the nest longer than/the young of most passerine birds that do not nest in hollow trees.