

uncommon here. Recently, while talking to Rolland Fenwick of Regina about this record he told me that he had seen two Bobcats this year while bow-hunting for deer in the Qu'Appelle River valley (near the Regina Natural History Society's "Hidden Valley") about 20 miles northwest of Regina. This area is more of a wilderness than is generally suspected, many deep ravines and extensive woods being found especially along the north-facing slopes of the Qu'Appelle valley and in the tributary valleys. Boggy Creek at Bredin, for example, where I took the Bobcat and where Frank Brazier reported a Mountain Lion (**Blue Jay**, 18: 182-183), is rather extensively wooded and deer and other forms of wildlife are numerous throughout these areas. The Bobcat specimen, a half-grown female (weight 6 lbs. 15 oz.) is now in the study collections of the Saskatchewan Museum of Natural History. It is the first known record for the Regina vicinity.

Ed. Note: The range of the Bobcat in Saskatchewan is believed to be limited to the extreme south and southwest, generally south of the Qu'Appelle River on the east, and the South Saskatchewan River (from Elbow) on the west. (Hall and Kelson, 1959. *Mammals of North America*, Vol. II. Ronald Press, N.Y.; Beck, 1958. *A guide to Saskatchewan mammals*. Sask. Natural History Society). This distribution is supported by fur-return records for 1957 (which are based on game manage-

ment zones, thus limiting their usefulness) supplied through the courtesy of T. Harper, Assistant Director, Wildlife Branch, Dept. of Natural Resources. The Bobcat should be considered a rare animal. Further records are needed to establish its actual range and status. —R.W.N.

Summer Record of a Silver-haired Bat in Southern Saskatchewan

by R. W. Nero, Saskatchewan Museum of Natural History

The occasional occurrence of the Silver-haired Bat (*Lasionycteris noctivagans*) on the plains of southern Saskatchewan in summer, presumably as a rare breeding species, even as far south as Govenlock, has previously been noted (**Blue Jay**, 15: 38-41, 46, 121). A most recent record has been obtained for the extreme south-central region. A female Silver-haired Bat was submitted to the Museum for verification and for the record by Ronald Mayer, who reports that he found it at Bengough, Saskatchewan, on June 30, 1960, on the roof of a garage where it had been trapped by one wing caught beneath a loose shingle. Ronald states that this was the first bat which he had seen around the farm for many years.

The Mud Dauber Wasp

by Marion Nixon, Wauchope



This afternoon of December 29, I am reminded of the article I promised, last summer, to prepare for the **Blue Jay**.

The subject of the article appeared "in person" to remind me! Sluggishly wandering along a chair back, after a heavy flight from the chilly windowpane, my unexpected visitor was easily captured under a glass tumbler and is now sitting on a saucer at my side.

It is a long, slim, svelte queen thread-waisted wasp, which has left the sanctuary of our attic, where Mud Dauber nests of various sizes stud the rafters. From the "new look" she wears, her black and gold still unsullied by hard wear, she probably stirred to life in a mistaken belief that furnace heat meant spring.

We have watched her supping on moisture from sides of the glass

snatched hastily from the sink, and she seems to appreciate the grains of sugar slipped under its edges. With long legs dragging behind, or contorted into angular patterns, she squirms along the floor of her glass cage with her mouth applied so intently to the smooth surface she sometimes seems to get stuck . . . and her body arches and erects till she is actually standing on her head, ovipositor waving mildly in the air!

The Mud Dauber Wasp, with its hyphenated physique, has become a familiar resident of this pioneer house since shingles began flaking off from parts of the roof. It doesn't take much of an opening to invite entry by a wasp! We have Yellow Jackets, too, hived between walls where a knot had fallen from an old siding; and when they swarm each summer, we have to keep opening windows to let out individuals that seek their way from the attic via bedroom exits.

There are several initial cells of Yellow Jackets in the attic as well as Mud Dauber nests, often both species within a few inches of each other. But Yellow Jacket queens have never persisted, in the open attic, with their paper-shelled apartment houses, even though these old fir walls sometimes hum like a violin, with hundreds of insects aroused in argument between them! One such disturbance occurred just beyond the head of our bed; we could watch the wasps milling around a knothole high in the wall outside, and everyone was relieved that their angriness subsided without any escape valve being found to the rooms inside!

Mud Daubers never seem so vindictive when excited as do Yellow Jacket Wasps. Fewer are concentrated in their adobe apartment blocks . . . seldom more than a dozen or two cells per nest. So they do not live the communal life of the Yellow Jacket (or Hornet), nor even of the Polistes Wasp, with its single floor, upside-down apartment block, which is not enclosed in walls.

The Mud Dauber Wasp, when she feels impelled to found a new generation, seeks out a puddle edged with mud. With the flexible protuberances usually tucked inside her mouth, and her front set of legs, she kneads mud into a ball she can fly away with. She daubs these little pellets of mud

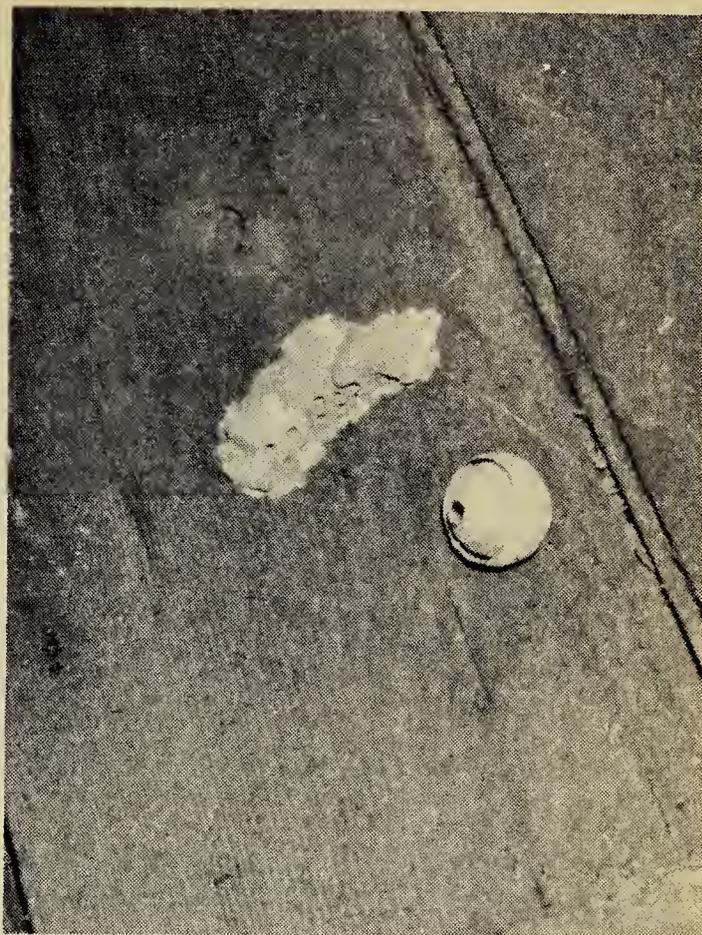


Photo by Marion Nixon

Nests of Mud Dauber (above) and Yellow Jacket.

against a rafter (safe from the wash of rain) much as a swallow would, cementing them together till she has a round cylinder about an inch long inside, and with the diameter of a lead pencil, which is left open at the bottom end. Mud is packed around it, to brace it against the wall, and each cell takes about a day to construct. If her luck is poor, it may take more than one day to fill the cell with food, so while the cell walls dry she starts her hunting.. The prey of the Mud Dauber Wasp is spiders . . . and ONLY spiders. She does not tear one to pieces as a Yellow Jacket will do when feeding on a fly, but anaesthetizes it with her sting. Then she carries it to the cell, stuffs it into the very end, and hunts for more which she pushes in after it. On the last spider stored there, she lays her egg; then she seals off the nest with mud. If it takes more than a day to fill the cell with paralysed spiders, she makes a temporary mud door to hold them in. There may be from a dozen to 30 spiders in one cell, according to their size.

Each cell when filled and closed, is covered with an adobe casing and

another cell built against this. The color of the mud used may differ with the puddle it was taken from . . . just as the paper nest of the Yellow Jacket tribe may have whole sections of wall a dull rosy grey instead of aluminum color . . . the wood pulp from which the paper was made having been nibbled from a red granary!

In three days the Mud Dauber egg hatches into a pale yellow grub. It takes a week to gobble the spiders provided for it . . . still "fresh meat" because they were only paralysed, not dead. In this time it grows six times its size, lines the cell with silk and, head downwards, spins itself a cocoon. This turns brown and shiny, like the inner coat of a peanut. When spring comes . . . or what feels like spring . . . the wasp inside bites itself free, ready to repeat the whole cycle of life again.

The Mud Dauber under my glass is a very fastidious lady. She hates to have mussy feelers, or soiled stockings. Sugar-stickiness seems repugnant to her, for she takes time out to wet her front legs with her mouth, and stroke down her feelers (leaving them with a crisp curl at the end like Christmas ribbon drawn swiftly between finger and thumb). Then her legs are cleaned, one upon the other, and the underside of the palpitating abdomen is also cleaned off by rubbing the back legs down it; then the legs are cleaned one on the other again. Long legs contorted to reach messy spots on wing or abdomen, the mouthing of front legs after they smooth the feelers or face, all make one think of a cat washing its fur.

And our Mud Dauber, *Sceliphron caementarium* (Drury) family Sphecidae, is a really handsome lady, over an inch long, jet black with touches of yellow at collar, epaulets, and in slim lines across the thorax. Her wasp-waist and abdomen are black save where they join, and so are her thighs, but from knee down she wears bright gold stockings with dark garters. Her limbs are exceedingly slim and long; her wings bronze gossamer carried elegantly closed, straight back from her shoulders and held delicately clear of her body. Close observation shows that each leg has its final sections edged with tiny saw teeth, and climaxed by a minute

cross of claws; she is equipped with files to gather material and to smooth it into shape, and claws shaped to help her cling in any position on even glass-smooth surfaces!

Those files may serve another purpose, too, in wounding the spiders she attacks. I have sometimes confined more than one Mud Dauber Wasp within a glass, and watched their reaction to each other. They seem very slow to anger, but when excited one will attack the other when they blunder together in the confined quarters. And it will keep on attacking the same wasp as though determined to kill it. However, though bitten and struck by the ovipositor of the attacker, the "underdog" has never been killed outright in my experience, nor even paralysed for more than a few moments. Stunned by shock, perhaps, and left dozey by the sting; but the attacker also seemed dozey, so it could have been wounded also, or else exhausted by the struggle and perhaps poisoned by its own overstimulation.

After lying still a few moments, the stung wasp would stumble to its feet, gradually regain a normal state of energy, and start climbing the glass wall again. If it blundered into another wasp, it was quite as likely to take the role of the aggressor as to fall prey again, itself. Between the captive Mud Daubers it seemed to be contact that triggered an attack. They did not attack "on sight" nor seemed to hold spite. And I have never been "threatened" by a Mud Dauber, though I am very wary of angry Yellow Jackets, and steer clear of the bigger black-and-white wasps we know as hornets. Luckily, these bald-headed" wasps have never chosen to build their huge paper nests inside our buildings, though we often find them supported by branches of a twiggy underbrush, incorporated as beams within a building) on the outskirts of a bluffy slough.

In my snapshot, taken in our attic, you can see the cell doors of the adobe Mud Dauber's nest, left open when the wasps emerged from their cement rooms. Close by is the initial cell of a Yellow Jacket, its second framework partly constructed. Obviously that queen wasp must have perished, for the paper globe is there yet, still in the same stage.