

Noccy the noctule: (left) holding on by one foot, with wing and tail extended as in flight; the extremely mobile wing-tip is often in a different plane from the rest of the wing; (right) discarding the skin of a gentle

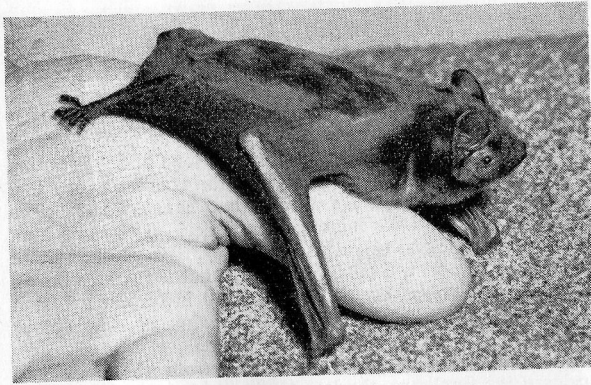
Noccy the Noctule by Fred J. Speakman

A NOTE in the dining-room on September 10 saying 'Bat loose in room' was my introduction to him. What a terrified creature too! His squeal was so loud and penetrating that we could hardly bear to stay in the room. A boy had brought him to the house and, as I had handled bats before and tried to keep alive injured ones, I decided to tame him. He was a noctule and we called him Noccy. He weighed about an ounce. His coat, though brown, was not the golden brown it is supposed to be, except at times and in certain lights; it reminded me of the ripe head of a reedmace. The colour underneath was a little duller but not white.

The wing membrane, which sprang from the body and enclosed the forelimbs, the legs to the ankle and the tail, was black. Below, along the humerus, there was a little hair, and on the interfemoral membrane much fur at the base of the tail. Noccy carried his tail below his body to form, with the membrane, a pouch. I did not once see him use this for food, but I should hardly have expected to do so, since he did not feed in flight while he was with me. He extended his tail in flight and when he was using it as a fifth foot; it was then pulled alternately left and right, to follow the forward-moving hind foot.

His hands were enclosed in the membrane of the wing proper, except the thumb which was free and provided with a good claw. Unlike (for example) the fruit bats, Noccy never used the thumb for feeding, though he would stretch it out towards the feeding hand. The tips of his fingers in their membrane were still mobile, and he used them either straight or bent to grip a surface when his wings were extended.

His black feet with five equal toes were even more fascinating. There was something almost reptilian in their groping for a hold. Each toe ended in a claw; translucent, curved and sharper than any squirrel's. At the base of each claw was a tuft of bristly tactile hairs that swept a surface as, with claws lifted, the foot was moved over it. Only after he had examined it did Noccy obtain a grip. But what a grip! One claw of one foot was sufficient to hold him without difficulty, as he turned, scratched and even washed. The leg itself could turn till it was



Still thin and deflated as he starts to warm up

twisted on itself with the membrane wrapped round it — all without apparent discomfort.

Somebody with more knowledge than I should really decide how much and how far a bat can see. The 'blind bat' is certainly not blind. Noccy's eye, covered at rest by a thick, skin lid, appeared protrusible: it rose from its encircling lid till it stood out like a brilliant black rounded bead. Surely he must have made good use of it then?

The front of Noccy's muzzle was black at first. Behind it were raised and flattened tubercles of flesh, each sprouting a stout black hair. The purpose of these I did not discover, but below the chin were more long hairs, and these I saw often in use. When Noccy was uncertain of proffered food, or did not really want it, he would pass his chin hair back and forth across it before deciding to accept or refuse it.

Noccy spent his lone hours in a large cage with food and water: later I gave him a piece of Harris tweed with a thought — which proved futile — of keeping him warm. For the first week or so his one aim was apparently to be out, up my hand and arm to my head, and thence to explore the room, after which he craved only to be with me. Yet at first he bit savagely, leaving two deep holes from the upper canines. He hung on when he bit, so that instinctively I flicked him away with the pain of it — perhaps a foot away, without harm. In fact, he

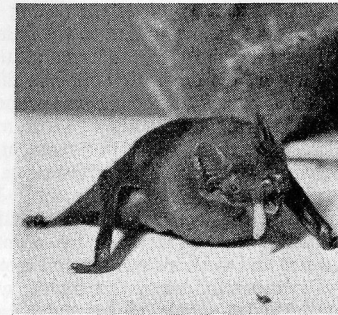
often dropped voluntarily six or seven inches, wings closed, without hurt. At first he bit in the terror derived from capture: then in error when he misjudged his distance from food — sensed probably by scent, for I do not think he could see food straight before his muzzle. His initial terror disappeared, but his errors continued till the end. Certain sounds, however, always terrified him: the passage of my wife's hand over her oiled-silk apron, the turning of a book page, the rustle of newspaper and the tearing of paper.

In the cage Noccy usually hung torpid, even in September. He then felt dead-cold — much colder than his surroundings; even his Harris tweed felt measurably colder where his body had hung against it. I wanted to register these differences, but it was not easy. He was aware of the switching-on of a light, or even of my entry into his room, which meant that he had already begun to warm up. The lowest reading I obtained was 48° F. and I am certain it was really lower. From that it rose to 98° at least. Even when cold and torpid, with breathing slight and shallow, he could move, lift and turn his head, crawl and choose his direction.

While he was warming up, his ears were in constant motion: he lifted them, depressed them forward and lifted them again rapidly. The muscles of his face, neck and shoulders heaved, as if in some gigantic struggle to come alive again. He could lift his head, but it swayed and throbbed as if out of proper control. As his breathing quickened, it shook his whole body.

Then he lifted his head and mouthed. He might throb audibly or make a low buzzing. His time for warming up varied, not strictly according to the season of the year, though roughly from five minutes in September to thirty in mid November, and later still to forty.

Early in February, when Noccy took twenty minutes to warm up, I tried to time his breathing, but something more



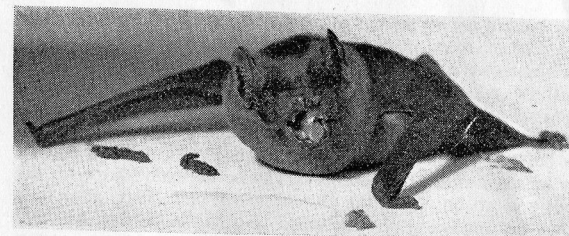
Warmed up and hungry

accurate than the human eye and judgement are needed to time breathing which is sometimes deep and powerful, sometimes weak and shallow, and always punctuated by pauses of varying length. After one minute he appeared to be taking thirty-eight breaths to the minute, and at the tenth it had risen to 101, with scent from the mouth-glands. At the fifteenth minute it was 128, and then (to show how unreliable I am as a timekeeper) at the twentieth I counted only 124. Later I timed the breathing of Noccy warmed up and made it 160 to the minute.

I know he washed more often than I saw, for otherwise he would not have kept so sleek; but tales of a noctule's elaborate toilet at each hanging up are certainly not true for the winter, if Noccy is any guide. We often heard the rattle of a scratching leg on the side of his cage, and sometimes scratching led to washing. Upside down he would scratch his left side with his left leg; then over it came to the middle of his back, and down to scratch the back of his head. Then he would wash his inter-femoral pouch. Then more scratching with a foot under his half-stretched wing. (At rest he tucked his wing under his body without interfering with the pouch.) Next he licked and bit his wing and membrane till the skin bulged out like a piece of balloon elastic, and the pink mouth showed through as it pushed and pressed.

After feeding in the evening, Noccy would eat again in the night from his tray. Often he would be down feeding during the day, with gentles crawling unmolested in his fur, though he picked up those immediately within reach. Gentles formed the bulk of his food; it was the fishing season, and I made some good friends showing him to the sellers of bait. He would eat between 100 and 150 gentles at a meal, and later pick more from the tray in his cage. It took him fifty seconds to eat the first gentle or pupa, but when he was properly warmed I could hardly get them ready fast enough. When more or less sated he would discard the skins, which in a moment or two turned black. (If he chewed or sucked my trouser-leg he left a hard dark ridge smelling strongly of mouth scent.) I tried him with flies, but he flinched from the tickling legs and refused them, as later he refused cockroaches; they made him give his little spitting sneezes and wash his nostrils and mouth.

His other food included moths, gnats, pear, apple, orange, orange juice, apple pie, custard (which he loved), buttered biscuit, cheese, banana, honey, potato creamed with butter and



Surrounded by discarded skins which soon turned black

milk, cooked fresh herring, cod-liver oil, milk, tea and — greatest treat of all — milk chocolate. He was a pig for milk chocolate, snatching, biting and hanging on till a slice came off big enough to satisfy him. Placed near him when he was torpid, it made him breathe more rapidly and warm up much more quickly; and he seized it long before he was warm. He smelt other things, too. From a circle of outstretched hands he would pick out mine and fly to it. And often when he was in his cage warming up I would see him lift his head and raise first one nose tubercle, then the other, as he identified me. It was a long time before I saw him drink. As long as there was enough liquid he dipped in his lower jaw and ladled it out; only when it was nearly gone did he resort to licking — most thoroughly.

He made a number of sounds besides his piercing squeal: a little high squeak when feeding, as if to clear his throat; little coughing sneezes just like my baby's when (as I am told) she is clearing her nostrils; cricket-like chirps when a hand restrained or drew him back from my arm-pit; and on November 30, from under my coat, his own call, 'whieee, whieee, whieee'.

In December Noccy was still awake, feeding and beautifully fit. In the first fortnight of January he was eating up to 90 gentles a day and taking perhaps another hundred during the night. Always now, fed or unfed, he wanted to be with me. I took him to meetings and showed him off, and to gatherings of children, who held and fed him. I went for walks in Epping Forest with him, took him shopping hidden in my coat and started up the car by hand with him on my shoulder under my coat. He could accommodate himself in the narrowest of spaces and never came to harm. In February I thought he was going to hibernate, for he took forty minutes to warm up;

yet he still ate 90 gentles at a meal. But he had changed: his muzzle, the soles of his feet, the under sides of his ankles and his tail joints were all pinker; and the ultimate tail joint was longer, with twice as much free vertebra as before.

Sonar — the sending out and checking back of supersonic sounds — is not, I discovered, the infallible guide it is supposed to be. At his fittest Noccy would frequently miss his landing by inches and fall to the floor. Thence he would hurry to my foot and up my leg to the crutch or arm-pit. Time after time when he was being photographed in a studio he flew into the wall or into objects near the wall. Then he would drop to the floor with wings outspread — a position from which he rose with grace and ease with a single wing-beat. Why the failure to judge accurately? Not feebleness, nor yet unpreparedness, for he would stretch his wings first, either alternately or both together and forward in parallel; and he could often have glided as far as he flew; much of his flying was gliding. Did he fly to warmth? Was there something in the radiations from light or flame that disturbed his judgement?

In mid February he was in superb condition. He ate 49 gentles in seven minutes, then wanted to hide again in my clothing. I held him away, and time after time he flew back. So I got my wife to hold him, that he might learn to fly to me from a distance: four feet, five, six, and a swift glide to me at each letting-go. Then suddenly, as he dropped, he turned and flew into the fire. My wife whipped him out, burnt but alive. We rushed for acriflavine, which was all we had.

For two days he remained warm, in such pain, I suppose, that he could not sleep; but he was still eager for food. I took him to a vet, who could do no more than I. The bat, he said, was saved; and he did indeed seem to be. Shining new skin appeared on his damaged foot and leg, and on March 2 he ate chocolate and 105 gentles. Then I found he had an unquenchable thirst. The interfemoral membrane, now dry and brittle, had started to tatter; and he would never fly again, for the wing membrane that had seemed untouched by fire turned brittle, too, and the tip crumbled away.

One day I picked him from his box on the hearth. 'Milk,' I called, 'with two drops of brandy'. But the milk ran down his chin to the poor burnt body; he could not drink. I spoke to him softly, 'Noccy, Noccy', in the way that had always brought response; and knowing what he wanted, I held him under my

arm. For perhaps half a minute he lay still in my hand; then I felt him move. He gave a little bubbling breath, and for a moment I thought he was going to revive, that he was warming up in the old way. I drew him out gently but eagerly. There was no warming up. I put him back under my arm; but Noccy was already dead.



Tact Among the Trees

by J. D. U. Ward

THE amateur of trees who has sought permission to see a specimen and finds himself standing with the proud owner under the branches may often wish for a good store of tact on which he can draw at will. On the question of age, which will almost certainly arise, he is aware of three facts: that the ages of large or apparently old trees are usually much exaggerated by their owners and by local tradition; that a steep reduction in the age estimate will not be welcome; and that he can rarely prove a negative. Also, as we go back, centuries count for less. Hardly anyone, other perhaps than historians working on the period, feels the interval between 1350 and 1550 to be as long as that between 1750 and 1950. That is time's deceiving trick.

Certain trees are likely to prove teasers: oaks and yews, because a few have indeed attained great ages; sycamores and cedars of Lebanon, because nobody knows when they were first introduced; beech, because specimens which are almost certainly less than 250 years old can look extremely ancient and decrepit. Recently, standing under the remarkable sycamore at the west end of Dulverton church, I was told that local pride and tradition credited the tree with 800 years. I cannot prove that it is not so old, but the odds are against it. An authority who wrote that the tree we call sycamore was not mentioned in England till the sixteenth century was wrong, for the great maple — as *Acer pseudo-platanus* was properly known before it acquired the false and misleading name of sycamore — was listed in the fourteenth, and perhaps in the thirteenth, century; but we have neither proof nor strong hint that it was introduced by the Normans or the Romans. Of ancient cedars one can say