

Television shows and magazine articles have left the impression that field biologists lead a romantic and exciting life as they wallow with whales and associate with amiable apes. Forgotten is the fact that most mammals are shy and solitary, devoting their lives to remaining cryptic. Seldom seen, their habits must be mainly deduced by such methods as following tracks and examining droppings. A panda study is like that too.

Much of February was devoted to collecting the small and mundane facts which will ultimately, one hopes, reveal the habits and needs of the panda. For instance, my wife Kay, who joined us in early February, has the task of analyzing droppings to determine not only which species of bamboo the panda has eaten but also the proportion of stem to leaves. She dries the droppings in an oven that perches on the small wood stove in our tent. Wet samples awaiting processing and dry ones ready for sorting are by necessity scattered around the tent, on trunks, table, any available surface : the place at times resembles a stable.

A rare snowfall finds Hu Chin Ju and myself tracking pandas beneath a gloomy sky. The bamboo is bowed with snow, and as we press through it the stems shed their icy burdens down our necks. In places the bamboo is so dense that we must crawl; in others only tenuous handholds on brittle shrubs keep us from tumbling down some steep pitch. At intervals a compacted area of snow littered with bamboo remnants reveals where a panda sat to feed. With fingers so numb from cold that they can barely hold a pencil and shivering in our sodden clothes we record the age of each stem eaten and measure the remnants. One feeding site revealed that the panda had consumed 213 stems. Having measured and weighed various bamboo parts, we can calculate that the animal ate about 3 kg in one casual meal. To trace the route of a panda for 2 km may take all day. Under such uncomfortable conditions there are no thoughts about the romance of fieldwork.

February also marked a new phase in our work. Howard Quigley, a research fellow of the New York Zoological Society, arrived to assist for several months with radio-tracking. Having studied bears, as well as being an expert in radio telemetry, he is ideally suited to participate in the project. We now began the task of trying to catch pandas so that we can fit each with a radio collar. Traps were baited. Day after day we made our tedious and far-flung rounds to check traps but without result. Our traps are in good locations where pandas can logically be expected to walk. But panda logic and human logic do not necessarily coincide, and the traps remained monotonously empty. Still, there were moments of intense expectations. Once Wang Lian Ke saw a panda ambling toward a trap, but with only a few meters to go it sensed its human observer and bolted. Another time a panda circled a trap, unable to

reach the bait because a yellow-throated marten had earlier triggered and closed the trap door.

Not that all our work includes tedium and discomfort. There are moments of quiet pleasure too :

- Sixty to seventy golden monkeys are scattered in the trees. Off to one side are four large males in a birch, stuffing themselves with lichens festooning the branches; in a nearby spruce 7 youngsters clamber playfully among the boughs. Most animals rest peacefully in the morning sun that has just descended the winter slope. I join the animals in the sun. Near me are several females with their young. A large male swaggers along a branch, his tail looped high in a dominant arc, and approaches a female with an infant at her chest and a juvenile at her side. Tenderly he grooms the juvenile. Then, going to another female with infant, he tries to groom that youngster too but its mother envelops it tightly in her arms. Forcefully he pulls the infant from her, grooms it gently and just as gently releases it back into its mother's embrace.
- A subadult panda has travelled down a snow slope and I follow its tracks. Wherever there is a small clearing, without bamboo or brush, the panda toboggans downhill on its chest and belly, no doubt delighted with its wintersport. Howard, who traced a different section of the animal's route, found a place where it had glissaded down, then walked back uphill to repeat its solitary game.

And there are exciting happenings as well :

- Four Asiatic wild dogs pursued a panda. Fleeing downhill the panda finally eluded the predators by fording a river. Having escaped one danger, it now faced another. The hunt had ended near the Wolong project headquarters and been observed by the local people. The exhausted panda was herded into a sheep pen and from there transferred into captivity. I saw the animal the following day. It is a female, obviously old and in poor condition, with blunted canines and skin drawn tautly over her broad skull. Her temperament impressed me more than anything else. Instead of bleating, chomping her teeth, or emitting roaring barks, as excited and angry pandas are wont to do, she placidly took sugar cane from our hands, by neither sound nor action indicating that until the previous day she had been wild and free.
- A panda passed within 35 m of our tent before dawn, and its tracks in fresh snow reveal that it was travelling steadily and at an angle uphill. Some 150 m away were the tracks of a second and smaller animal moving in the same direction. All day we traced their routes, trying to discover from where they had come and to where they were going. Late in the afternoon we not only found them out but also observed that they had found each other.

A lone spruce rises tall and straight from a bamboo thicket. Near the tip of a bough, some 15 m above ground, crouches a small panda, perhaps 3 years old. Below, among the lower limbs, sits a massive panda. Hu and I infer that the youngster has sought refuge in the tree after being chased by the adult, but, being unable to determine the sex of the animals, we do not know the basis for the antipathy. Twice the young panda sends a long-drawn hoot plaintively across the silent and snow-bound hills. We see the adult panda slide down the tree hindfeet first and disappear, and we watch the youngster seek a secure seat before dusk and fog obscure our view.

As we turn toward Wuyipeng, we grin at each other with pleasure. Every project does have its romantic and exciting moments.

George Schaller