

Snow leopard

In 1572 the College of Arms in England granted Thomas Fludd of Barsted a patent for a heraldic shield with what appears to be the head of a snow leopard as a crest (P. Till, pers. comm.). Yet the snow leopard remained unknown to the scientific world until Georges Buffon pictured the "L'once" in 1761 in his *Histoire Naturelle*—and mistook it for a cheetah when he stated that it occurs in Persia and is used for hunting. Although in 1779 the naturalist Peter Pallas accurately defined the snow leopard's range in the Altai and carefully distinguished it from the leopard (see Guggisberg, 1975), the cat remained a creature of mystery. Rare, shy, and withdrawn into one of the most remote regions on earth, it has been encountered by few outsiders. I ventured into the mountains with the hope of studying snow leopard but my attempts failed, as almost perversely the animals eluded my efforts to observe them. In my chosen study area around the Chitral Gol most snow leopard were shot before I could begin intensive work.

Mountain Manarchs

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The following pages present my own notes and some published observations to indicate how little has so far been revealed about the habits of this lovely cat.

Status and distribution. The snow leopard inhabits the mountains of Tibet and the Himalayan chain westward through Pakistan into Afghanistan and northeastward over the Pamir, Tien Shan, and Altai ranges to the Sayan Mountains near Lake Baikal. The animal may be found in conifer and oak forests as well as above timberline. In the Dzhungarian Ala-Tau it has been reported at 900 m, and in Chitral and Kashmir it may descend to 1500 m, although it usually remains above 3000 m with some sightings having been made as high as 5600 m.

Snow leopard density in the Himalaya was fairly low even fifty or more years ago, judging by how seldom hunters encountered them. Of course man's attitude toward predators has not been one to promote contact. Ward (1923) felt that snow leopard "should be classed as vermin" and indeed the cat was so treated legally in Kashmir until 1968. India, Pakistan, and Nepal now give snow leopard official protection, but residents continue to kill them, sometimes in defense of livestock and at other times merely because an animal presents a suitable target. The skins often find their way to the fur shops. For example, I counted 14 skins in one Srinagar shop in 1968, and 18 in various shops in Lahore during 1972.

The snow leopard has a wide distribution in northern Pakistan. Definite reports were obtained from northern Dir, from most of Chitral, and from such places in the Gilgit Agency as the Yasin Valley, the vicinity of Gupis, the Kargah Valley, the slopes above Bunji, the Nanga Parbat massif, and the Haramosh Range. The cats also occur throughout Hunza, especially in the Khunjerab Valley and north of Misgar where near the Kilik Pass I saw the tracks of two animals. Further east, animals persist in the Baltistan area and there I found the spoor of one animal near the Baltoro Glacier. All villagers agreed that the snow leopard is rare, with usually no more than 2 or 3 animals frequenting a particular valley at intervals. My attempt to census animals was confined to the vicinity of Chitral town, an area which probably had the densest population in Pakistan until the late 1960s. In December 1970, I saw a female with small cub in the Chitral Gol, and tracks

indicated the presence of another animal, most likely an independent subadult. That winter at least one snow leopard was shot near the reserve. During the winter of 1971-72, Prince Muta-ul-Mulk shot 2 females at Shogore and a villager killed 3 in Kesu Gol. Another death brought the known tally that winter to 6. When I visited the Chitral Gol again during the winter of 1972-73, one snow leopard passed through the area and a second animal is also said to have spent a few days there. In mid-January 1973, Prince Burhan-ud-Din notified me that a snow leopard was at Tushi. Checking at his home, I found its fresh skin hanging on the veranda: his gamekeeper had just shot the animal, a male. Later that month I saw a female at Tushi. During a visit to the Chitral Gol in January 1974, I found no snow leopard spoor and the sanctuary staff told me that no animals had been there all winter. None came later that season either, although one animal hunted around Chitral town for awhile. In February 1974, when snow lay low on the slopes and wildlife had concentrated in the valleys, I attempted to census snow leopard by searching for spoor and interviewing persons in many villages. After covering an area of about 3000 sq km, I had evidence for 4 or possibly 5 animals (Schaller, 1976b). In four years a viable snow leopard population had been here reduced to the vanishing point through lack of protection. It is not coincidental that the decline occurred during a political and legal interregnum, a time when the semiautonomous state of Chitral was absorbed into the North-West Frontier Province. Snow leopard seem to exist in similarly low densities over much of northern Pakistan. An extrapolation from the Chitral census to the cat's total range in the country gives a figure of 104-130 animals. Anon. (1972) placed the number at about 100, but until more precise data are available a rough estimate of fewer than 250 seems realistic.

Snow leopard are widely but sparsely distributed along the higher reaches of the Himalayan chain in India (see Dang, 1967). In Nepal they occur along the northern fringe of the country above the evergreen forest belt. I attempted to estimate their numbers in a block of about 500 sq km centered around Shey and Phoksumdo Lake in the Kanjiroba Range. No cats were wholly resident at Shey. During my 35 days there, one animal hunted the area from November 12 to 16 (without catching anything), and the tracks of two transient animals were found on the morning of

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November 25. I approached Phoksumdo Lake from the east in early December, having walked up the Namgung Valley across the 5350 m Namdo Pass and down the Deokomukh Valley. The whole route was covered with fresh snow. At the northern end of the lake I spotted one snow leopard, and tracks indicated that a second one had vanished unseen. On the slope above the lake was a third set of tracks, that of a large male. Probably at least 6 snow leopard used the 500 sq km area. In March 1972 one large and one or two medium-sized animals patrolled the slopes around Lapche, but they spent most of their time across the border in Tibet. I am unable to give an estimate of the number of snow leopard in Nepal. Dang (1967) felt that "in the region of 400, give or take two hundred" survive in "the Himalayan complex of mountain ranges" but this figure is much too low.

With snow leopards becoming increasingly rare in South Asia, it is fortunate that zoos have improved their techniques of raising animals. The *International Zoo Yearbook* for 1966 reported 34 snow leopards in zoos but of these only two (6%) had been born in captivity, whereas in 1974 there were 127 animals in zoos of which 46 (35%) had been bred in captivity (Kitchener et al., 1975). Snow leopards in zoos also tend to live longer now, with Crandall (1964) reporting a maximum of almost 9 years, Marma and Yunchis (1968) of 11 years, and Kitchener et al. (1975) of 17 to 19 years.

Social relations. I encountered a female with one small cub, a solitary female, and an unsexed medium-sized individual, which, judging by tracks, was accompanied by another animal of similar size. In addition, I came across 29 sets of recent tracks of which 25 were of solitary individuals and the rest of pairs. Among the tracks were 7 large sets, probably those of adult males with forepaws measuring at least 9.5 cm in length and pads at least 7 cm in width. Dang (1967) met 12 solitary snow leopards and 4 pairs, and Ward (1923) saw 5 single individuals and a group of three—and he shot 5 of the 8 animals. Houghton (1913) observed a pair, of which one was a male, and three solitary individuals. Other lone animals were reported by Baldwin (1876), Dunmore (1893), Darrah (1898), Stockley (1928), Kennion (1910), and Ward (1966). Meinertzhagen (1927) watched two animals, and Kusnetzov and Matjushkin (1962) observed a single animal and the tracks of a pair. Elliott (1973) gave second-hand accounts of a

pair on an ibex kill and another pair on a bharal kill. Snow leopards obviously travel alone much of the time. When two or three large animals associate they may represent an adult male and female, a female with almost-grown offspring, or independent cubs in a litter which has not yet split. Schaposchnikoff (1956, quoted in Hemmer, 1966) reported on a group of 5 snow leopards, the largest on record. The sexes of sighted or slain animals are seldom reported. In 1972 a villager in Chitral shot a group of 3 snow leopard which consisted of a female with two large cubs, a male and female. The sexes of some other snow leopard, all solitary animals, killed in the Chitral area included 8 males and 4 females. The *International Zoo Yearbook* for 1975 lists 57 males and 70 females in zoos, and the yearbooks published between 1966 and 1975 report 48 male cubs and 37 female cubs among sexed litters born in captivity.

An animal may be solitary but not necessarily asocial. Residents in an area may know each other and associate occasionally, as in the case of tigers (Schaller, 1967). "One fact has been repeatedly noticed, and that is the incidence of pairs working valleys in coordination, the prey, generally bharal, being chased from one part of the valley into the area where the other animal of the pair hides in waiting Often the pair will eat together at a kill," wrote Dang (1967). Neither my few observations, nor those in the literature, can support or refute this viewpoint. A male and at least one medium-sized animal used the same stretch of terrain for several days at Lapche, their tracks crossing on several occasions, but to my knowledge they did not meet even when the smaller animal spent about four days on a bharal kill. At Kilik Pass a male followed the two-day-old route of a medium-sized animal for 3 km before the tracks veered apart. It thus remains unresolved whether the snow leopard has a social life like that of the tiger or whether it remains solitary except when courting or when a female has cubs, as is the case among puma (Hornocker, 1969).

Snow leopards use several direct and indirect means of communication. Their vocal repertoire is varied. Hemmer (1966) noted that they purr and produce a soft puffing sound through the nose, a vocalization which is also found in tiger and clouded leopard and serves as a greeting. Snow leopards growl, snarl, hiss, and spit, as do all cats, and they may also emit a "low rumble" and a coughing roar (Freeman, 1975). Two animals shot by Dang

(1967) "let out startled growls" and one he met "snorted in surprise." Small cubs at the New York Zoological Park gave long-drawn, high-pitched miaows when hungry, grunted when they anticipated food, emitted bleats when held against their will, and hissed and spit when annoyed. Males miaow harshly while copulating. Snow leopards do not roar like other large cats, their only long-distance call being a "piercing yowl," as Ulmer (1966) phrased it. One March evening at Lapche, as I huddled against a boulder during a snowstorm while waiting for a snow leopard to pass along the trail below, I heard a loud miaow at 1830 hours and another at 1855. Villagers there and in other parts of Nepal told me that the cats call like that when searching for a mate.

Both males and females mark their range by depositing scent and feces and by making scrapes. These three methods are often combined by males, as shown by the behavior of one at the New York Zoological Park: he first rubbed his cheek sinuously against a log, then scraped the cement floor of his cage several times with his hindpaws, squatted to deposit a small amount of feces, and finally swiveled around and with the base of his tail quivering sideways squirted several jets of fluid up against the log. Later he sniffed the site and grimaced, with his tongue hanging far out in the manner of tigers. Scent marks are difficult to discern in the wild, except for occasional pungent odors on boulders, but the 20-cm-long scrapes remain conspicuous for a long time. Eight out of 59 scrapes had been marked with feces and at least two with urine. Most scrapes had been scratched into gravel or dust but two were in snow and two in pine needles. The presence of one mark may stimulate the same or another animal to use the site again, and it was not unusual to find several scrapes or fecal deposits of different ages together. The effectiveness of the marking system is enhanced by the fact that the animals often use the same routes and leave their signs on prominent locations. In traveling along, the cats tend to trace the base of cliffs where the precipices give way to scree, in contrast to wolves which usually follow valley bottoms. Livestock trails along slopes are also favored. Snow leopard often mark sharp bends in the trails, crests of ridges, promontories, and other such sites. For instance, near Phoksumdo Lake I followed a much-used trail along the contour of a slope for about 5 km. Six of the 11 scrapes along that trail were on a crest or rocky spur and 3 others were within 50 m of such a site,

as were 3 out of 5 sets of droppings. The snow leopard's marking system closely resembles that of leopard in the Karchat Hills and of tiger.

Virtually nothing is known about interactions between adults in the wild. Ognev (1962) reported how two unsexed individuals reared on their hindlegs in play and exchanged blows, and then "arching their backs at one another" they parted. With estrus lasting 2 to 8 days (Frueh, 1968; Kitchener et al., 1975) contact during courtship remains brief. One estrous female at the New York Zoological Park permitted the male to mount her only on February 9, 10, and 11. I observed the pair for 2½ hours on the second day, and during this time the male mounted 22 times. The two courted in typical cat fashion. The female initiated 18 of the copulations by circling the male and rubbing herself against him before crouching in front of him. On 13 of the copulations he grasped the skin on her nape with his teeth and sometimes bit it repeatedly while he was mounted. He also licked her neck on three occasions. Toward the climax he often emitted long-drawn, harsh miaows, and the female sometimes growled deeply. After the male dismounted the female rolled on her back on 5 occasions or immediately began to pace the cage restlessly until she presented herself again. The same pair mated again from March 4 to 6. The female gave birth to three cubs between 1430 and 1700 hours on June 12.

In Russia births occur in April according to Novikov (1962). With a gestation period averaging 96 to 105 days (Kitchener et al., 1975; Marma and Yunchis, 1968), the young would have been conceived in late December and January. Snow leopard in the Himalaya usually court in March and April and give birth in June and July according to my local informants. Dang (1967) found 3 small cubs in a den in July, and the cub I saw was probably born in August. Captive snow leopards are born between April and August with a peak in May (Freeman and Hutchins, in press). One to four but usually two to three cubs are born, each weighing from 500 to 650 g on the average (Kitchener et al., 1975). Ward (1923) caught two litters with two cubs each, Baldwin (1876) mentions that a female was killed near Neti Pass in Tibet and two small cubs were found nearby, and Pocock (1939) reports a litter of 3 cubs from Gyantse.

The young are weak and have their eyes closed at birth. Of two

cubs born at the New York Zoological Park, one opened its eyes at the age of 7 days and the other cub did so at 8 days. At the age of 3 days they could creep and at the age of 11 days they could sit and stand shakily. The first teeth erupt between the ages of 17 to 23 days (Frueh, 1968), and at the age of 5 to 6 weeks they may venture from their den (Calvin, 1969; Freeman and Hutchins, in press). Since cubs are relatively immobile for two months the female needs secluded haunts and a readily available food supply if she is to raise a litter successfully.

I observed a female with a cub, about 4 months old, for several days in the Chitral Gol as the two fed on domestic goats we provided. A second cub had apparently vanished earlier that month, for the locals insisted that they had seen two young with that female. On December 14, at 0835 hours, the two cats reclined side by side on a spur. Behind and slightly downhill of them was a rocky cleft. Into this shelter the cub soon retreated and it still had not reappeared by 1530. The following morning, at 0700, the cub clambered about on the rocks 5 m from its mother. Suddenly it ran to her and touched its forehead against her cheek. It then fed on the goat for 40 minutes while its mother rested on a nearby boulder. Approaching her after its meal, the cub rubbed its cheek against hers, licked the top of her head, returned to the kill for one minute, and finally vanished from sight into its rocky retreat. Although the female remained in view all day, the cub did not venture forth until dusk at 1650. For three days after that the cub did not show itself in daytime, but at 0700 on December 19, I saw both lying 3 m apart on the crest of the ridge. They left the site during the night of December 20 to 21.

Food habits. The snow leopard is a cat of moderate size, about 200 cm long of which 90 cm consists of tail, males being somewhat larger than females (Ward, 1923). Dang (1967) weighed one male which "turned the spring at 110 pounds" (49.5 kg). One 4-year-old female at the New York Zoological Park weighed 31.7 kg and an adult male 39.4 kg. Big cats can generally subdue prey weighing at least three times their own weight (Schaller, 1972b). Thus most wild high-altitude ungulates except adult kiang, takin, and yak represent potential prey. In the Aktau Mountains the cats feed on Persian gazelle, and in the Trans-Ili Alatau on wild pig (Novikov, 1962). Kennion (1910) met a snow leopard on a Marco

Polo sheep kill. Dang (1967) mentions snowcock, takin, tahr, serow, goral, and musk deer as food items, and Ward (1923) includes monal pheasant and chukor as well. Ibex and bharal are the two main food species in the Himalaya, and in fact the snow leopard is known in parts of India as "Bhurel hé" or bharal killer. My Chitral fecal samples were collected mainly in the Chitral Gol and at Tushi with the result that markhor appear prominently (40%) in the diet (table 22). The Nepal samples contained at least 50% bharal. Livestock, mostly domestic sheep and goats, was a principal food in all areas but especially in Chitral, where 45% of the droppings contained this item. Villagers told me that a snow leopard may kill bullocks weighing as much as 135 kg. Meat is also scavenged when available. A yak died at Lapche and during the night a snow leopard ate from the carcass. Marmots contributed importantly to the diet at Shey. Vegetation was found in several droppings, those from Chitral containing the forb *Rheum emodi* and those from Shey some *Polygonum* and grass.

Novikov (1962) stated that snow leopards are active mainly at night, but judging by the literature they often hunt in daytime too. Dang (1967) watched them stalk bharal three times, tahr once, and snowcock once; Haughton (1913) saw them hunt ibex three times; and Ward (1923) and Stockley (1928) also observed them pursue ibex. With their smoky-gray fur tinged with yellow and white and broken by dark spots and rosettes, snow leopard blend so well into the background, whether it be scree or snow, that they are difficult to spot even during the day, at least by a human observer (plate 50).

Attempts to capture prey have been described several times. "We were lying behind a boulder watching the thar climbing leisurely up the scree and rock overhangs," wrote Dang (1967), "when a flash of white and grey fur dived into the spread out herd, and rolled down some hundred feet, all the time hanging on to a young thar ewe. The thar was in a very bad shape when we reached it, but still breathing. The snow leopard, of course, had vanished as soon as we rose to view." Stockley (1928), while hunting, was surprised when "a snow leopard suddenly raced across the hollow in which they [ibex] were feeding and made an attempt on a buck, which started away just in time. The leopard's outstretched claws raked a great lump of hair from the ibex's coat as it wheeled away." The herd then halted 100 m away and

watched the cat. Haughton (1913) observed another unsuccessful attempt during which a snow leopard "followed two ibex, bounding along behind them for a good three hundred yards until he lost them in bad ground where he could not follow." Another time this author watched a snow leopard chase several male ibex around and around a small meadow for about 20 minutes, the prey circling without escaping until the cat gave up its pursuit. In the Tien Shan a snow leopard was seen to walk casually toward a herd of ibex which watched it approach to within 60 m before bolting (Kusnetsov and Matjushkin, 1962).

With prey scarce, a snow leopard must travel far in search of food. The size of its home range is unknown, but judging by the long intervals between an animal's visits to certain valleys it must be quite large. In spite of the many bharal at Shey, snow leopard came there only twice in over a month. M. Sunquist waited in the Golen Gol of Chitral from February 5 to March 6 with the hope of live-trapping one of the cats. Only one animal walked down the valley during that period. I tracked various snow leopards for a total of about 43 km. One attempt at hunting was made in that distance and it culminated in a bharal kill. Several African reserves contain a variety of predators and prey at a ratio of about 1 kg of predator to 100 kg of prey (Schaller, 1972b). At such a ratio the Shey bharal could support only one snow leopard. Since several snow leopards and wolves inhabit the region, they must by necessity roam widely even though they eat livestock in addition to bharal.

Traveling snow leopards usually plod on at a steady pace, stopping only to mark the trail. One male scraped once in 5 km of travel, and another made two scrapes and one fecal pile also in 5 km. The routes may traverse snow-covered boulder fields, the cat leaping a meter or two from rock to rock, zigzag through a maze of cliffs, and angle across slopes, valleys, and streams. One individual on reaching a stream walked along the edge until it came to some ice-covered boulders. It leaped 2 m onto one boulder, 2.5 m to another, its claws digging in to get a grip on the smooth surface, and a final 2.5 m to the opposite bank. Meinertzhagen (1927) observed how two snow leopards simply waded through a stream, one pawing the water before entering, and then shook themselves afterwards. Ognev (1962) claimed that snow leopard can leap 15 m uphill, no doubt an exaggeration. Occasionally an individual

travels along its route and investigates various sites. I followed one such trail for 5 hours along a fir-covered ridge at 3000 m and then down a slope. The snow was about 20 cm deep. When I found the track it meandered within a small area as if the animal had been hunting black-naped hares whose spoor was common there. Then the track went to a large, solitary fir at the base of which the snow leopard had made a scrape. Further on it had halted by a fox dropping. A few minutes later it left the crest of the ridge to detour to a gnarled fir which it circled, and after backtracking to a second fir it returned to the main path. On the top of a spur stood two old firs, and in the needles beneath them the snow leopard made a scrape over one meter long. Traveling down the slope, it checked a hollow tree and soon after that the snow vanished and I lost the tracks.

When stalking prey, the snow leopard uses broken terrain for cover until it is close enough for a rush (plate 51). Tracks in the snow revealed the course of events leading to the death of one bharal male almost 4 years old. The bharal had wandered alone around the village of Lapche, which in March was still devoid of summer residents. Angling into a shallow valley, he had gone to a rivulet, his descent no doubt observed by the snow leopard. Its advance hidden by a boulder, the snow leopard stalked closer and, as the bharal stood by the water, it attacked, pulling its victim down at the point of impact. After eating some viscera and part of the ribcage, the snow leopard dragged the carcass 150 m up a slope and there deposited it on a rock. Much of the meat had been eaten when I found the site, and the cat, having observed my approach, fled unseen into a chaotic mass of boulders. At Tushi I examined four places at which markhor had been killed in January, 1973: one was at the bottom of an 8-m-deep ravine, another at the base of a small cliff, a third in a shallow gully bordered by scrubby oak, and the last in an eroded depression at the base of a rocky spur. These kills consisted of a yearling male, a 2½-year-old male, a 3½-year-old male, and a young—a rather disproportionately large number of males from a population in which this sex is poorly represented (table 13). The sanctuary staff at the Chitral Gol collected for me the horns of 7 markhor which they claimed had been snow leopard kills; of these 6 were males and 1 a female. Dang (1967) reported 6 male bharal kills, and I

found two such kills at Lapche. Thirty ibex kills were counted in one valley in the western Pamirs and of these 22 were males, two-thirds of them older than 4 to 5 years (Heptner et al., 1966). These figures suggest that males are more vulnerable to snow leopard predation than are females.

Snow leopard subsist partially on livestock in most areas. Domestic animals are usually guarded during the day and locked into corrals at night. With a cat's habit of eating slowly, the snow leopard is often driven from its kill before it has had a chance to eat much. The villagers in Buddhist Nepal avidly scavenge all kills, but those in Muslim Pakistan leave the carcasses for the vultures. In either case the snow leopard seldom has an undisturbed meal and even more seldom does it have time to lead cubs to the kill. Sometimes a snow leopard invades a livestock shed and slaughters several sheep and goats, as many as 15 in one instance related to me. In Chitral snow leopard sometimes lurk around villages after dark and snatch unwary dogs. I followed one track at dawn as it traced the narrow, stone-walled alleys of a village before ascending a slope beyond. However, snow leopard are now so rare that few villagers report consistent losses or complain about them.

I tied out several goats as snow leopard baits and one of these was killed at 1628 hours by a female: "She advanced slowly down the slope, body pressed to the ground, carefully placing each paw until she reached a boulder above the goat. There she hesitated briefly, then leaped to the ground. Whirling around, the startled goat faced her with lowered horns. Surprised, she reared back and swiped once ineffectually with a paw. When the goat turned to flee, she lunged in and with a snap clamped her teeth on its throat. At the same time she grabbed the goat's shoulders with her massive paws. Slowly it sank to its knees, and, when she tapped it lightly with a paw, it toppled on its side. Crouching or sitting, she held its throat until, after eight minutes, all movement ceased" (Schaller, 1972a). This attack proceeded rapidly, but during another stalk the cat moved only 50 m in ten minutes, alternately advancing in a crouching walk or sitting. The whole stalk lasted 45 minutes, but in the end it was too dark to observe details. These two goats, as well as three others, died of strangulation, judging by the superficial puncture wounds on the throats of the animals.

Dang (1967) asserted that of "34 natural and domestic kills ... most were neatly killed, either with the neck or spine broken," a statement whose accuracy I question.

The snow leopard begins to eat either around the chest and forelegs or around the lower abdomen and thighs, usually leaving the digestive tract intact. It guards the carcass closely for the usual gathering of Himalayan griffon, l ammergeier, jungle crows, and magpies would soon strip the bones. One female, obviously uneasy about being in the open near her kill, left the carcass 3 times within 15 minutes and walked 50 m away only to return at a fast walk when as many as 8 crows and magpies landed near the meat. Four times she lunged at the scavengers but these hopped nimbly aside. She then reclined by the kill for 25 minutes before abandoning it.

Snow leopards have never been known to prey on man, and even attacks, such as the seemingly unprovoked clawing of a woman described by Burton (1926), are exceedingly rare. Villagers may show their disdain for the cat by beating it to death with sticks and axes after cornering it in a livestock shed. A snow leopard may at times be surprisingly tolerant of man. Darrah (1898) shot 3 times at a snow leopard on a bullock kill and missed, as was his wont, yet the cat continued to return to its meal. Kusnetsov and Matjushkin (1962) described how a snow leopard watched two men at 25 m without being apprehensive. I observed a female for 28 hours over a period of 7 days in the Chitral Gol. This animal behaved with remarkable nonchalance toward me. When I first approached her slowly, casually, she remained lying on a boulder, watching as I sat down 75 m away. After that she dozed, but when two villagers climbed up the slope toward her, she slid backwards off the boulder and sneaked uphill, slinking from rock to rock in such a way that she was usually screened from view. Once she halted behind a shrub and looked down at the men before vanishing. Yet on the following day she permitted me to approach again. When I advanced to within 50 m of her she retreated 20 m and watched me from behind a boulder, only the top of her head visible. Then she reclined in full view on a ledge for 3½ hours. Toward dusk she snaked toward her kill below, a step at a time, keeping her gaze on me as she placed each paw carefully without looking, moving almost imperceptibly until after 10 minutes she

finally reached the carcass. I stayed there that night, lying in my sleeping bag on the crest of a spur some 60 m from the snow leopard as she fed and wandered around near her kill.