

# NATURAL HISTORY

FEBRUARY 1978 • \$1.25



9HYE1 11996 DDM96 01812 AUG78  
010 1 000  
MR C N HAYES  
1996 S DOWNING ST  
DENVER CO 80210

# NATURAL HISTORY

Incorporating *Nature Magazine*  
Vol. LXXXVII. No. 2  
February 1978

American Museum of Natural History  
Robert G. Goelet, President  
Thomas D. Nicholson, Director

Alan Ternes, Editor  
Thomas Page, Designer  
Board of Editors:  
Sally Lindsay, Frederick Hartmann,  
Christopher Hallowell,  
Ann Marie Cunningham  
Carol Breslin, Book Reviews Editor  
Florence G. Edelstein, Copy Chief  
Angela Soccodato, Art Asst.  
Katharine D'Agosta, Editorial Asst.  
Lillian Berger  
Rosamond Dana, Publications Editor  
Editorial Advisers:  
Dorothy E. Bliss, Mark Chartrand,  
Niles Eldredge, Margaret Mead,  
Thomas D. Nicholson, Gerard Piel,  
Martin Prinz, Francois Vuilleumier

David D. Ryus, Publisher  
Louis G. Bilka, Business Manager  
Mauricio Sola, Production Manager  
Carolyn Robinson, Marketing Manager  
Ernestine Weindorf, Administrative Asst.  
Eileen O'Keefe, Business Asst.  
Theresa Forney

Ann Brown, Circulation Manager  
Mary Sue Rynecki, Assistant Mgr.  
Elvira Lopez, Circulation Asst.

Publication Office: American Museum  
of Natural History, Central Park West  
at 79th Street, New York, N.Y. 10024.  
Published monthly, October through May;  
bimonthly June to September.  
Subscriptions: \$10.00 a year. In Canada  
and all other countries: \$12.00 a year.  
Second-class postage paid at  
New York, N.Y. and at additional offices.  
Copyright © 1978 by  
American Museum of Natural History.  
No part of this periodical may be  
reproduced without written consent of  
Natural History. The opinions expressed  
by authors do not necessarily reflect the  
policy of the American Museum.  
Natural History incorporating  
Nature Magazine is indexed in  
Reader's Guide to Periodical Literature.  
Advertising Office: Natural History,  
420 Lexington Avenue,  
New York, N.Y. 10017  
Telephone: (212) 687-2424

Notice to Members: New and  
additional membership support  
received since October 1, 1976, will  
assist the American Museum of  
Natural History in qualifying for  
federal matching grants awarded  
by the National Endowment for the  
Humanities.

Change of address notices, undeliverable  
copies, orders for subscriptions,  
and other mail items are to be sent to  
Natural History  
Membership Services, Box 6000  
Des Moines, Iowa 50340

## 2 Authors

10 **This View of Life** *Stephen Jay Gould*  
*An Early Start*

30 **Sky Reporter** *Stephen P. Maran*  
*Strung-Out Stars*

38 **A Matter of Taste** *Raymond Sokolov*  
*Pease Be With You*

42 **Bios** *Arthur W. Galston*  
*A Living Fossil*

46 **Abundant Birds of Beringia** *William H. Drury, photographs*  
*by Hope Alexander*  
*The water is cold, but the food is bountiful.*

54 **Buzkashi** *Asen Balicki, photographs by Jim Sheldon*  
*This violent game of horsemanship has become a substitute for war.*

64 **The Elegant Symmetry of Crystals** *Rodney C. Ewing*  
*Thirty-two ways to create a gem.*

72 **The Dust Storms** *Marilyn Coffey*  
*Settlers of the Great Plains found that the sky was limitless, but*  
*the earth was not.*

84 **The Ornamental Eye** *Ronald E. Thresher*  
*Fantastic ocular decorations of reef fish solve a long-standing*  
*dilemma of sex versus survival.*

90 **Book Reviews**  
*Notes from a Pioneer—Rosalie H. Wax*  
*In Pursuit of Birds—Michael Harwood*

96 **The Market**

104 **Celestial Events** *Thomas D. Nicholson*

106 **Additional Reading**

108 **Announcements**

**Cover:** *Common puffins nest in small colonies throughout the Bering Sea each summer. Their large beaks enable them to catch and hold several fish. Photograph by Hope Alexander. Story on page 46.*

# Buzkashi

by Asen Balikci

photographs by Jim Sheldon

*To local chiefs in northern Afghanistan, a game that resembles a cavalry charge is a contest for prestige*

*Buzkashi*, which means "goat dragging" or "grabbing," is an exceptionally violent game that tribes in northern Afghanistan (Afghan Turkestan) play on horseback. Besides expressing the fierce and incessant social rivalry that preoccupies Afghans, *buzkashi* also indicates the important role that the horse has played in central Asian history. Early armies of nomadic horsemen could assemble quickly, cover great distances, attack, and at full gallop and without dismounting, sweep up women, animals, and plunder. Genghis Khan used cavalry to establish an empire that stretched from northern China to the Mediterranean. He then employed mounted couriers to transmit orders and news over his empire's routes.

Although *buzkashi's* historical origins are unclear, they may lie in a traditional exercise of central Asian horsemen, who trained by riding, in turn, past a ditch and attempting to pick up a beheaded goat, or *buz*. No one knows when this exercise became a game in which all riders simultaneously attempted to seize the goat, which is now a calf carcass.

Of the many Afghan sayings concerning horses, one is, "Better to have a poor rider on a good horse than a good rider on a poor horse," an expression of the Afghan belief that *buzkashi* belongs to the horse. In northern Afghanistan, the horse is the focus of complex personal and tribal ambitions and rivalries. Chiefs feel that their honor is closely tied to the qualities of their horses and will spare no amount of expense and energy on feeding and exercising their animals—and on the rituals surrounding them. Horse

raising, once an important form of competition, has largely been replaced by the more violent pastime of *buzkashi*. One Afghan explained: "Everything in *buzkashi* is rivalry."

The groups involved in *buzkashi* on the vast plain of northern Afghanistan are primarily Uzbek and Turkoman (Turkic-speaking) populations, seminomadic sheep breeders and dry farmers who migrated across the Amu Darya (ancient Oxus River) from Central Asia. Among them live large groups of Persian-speaking Tajik, who excel at irrigation farming, and more recent settlers like the Hazara, of Mongol origin, and the Pushtuns, who are either farmers or nomads.

Hence, in a day's walk in the Narin-Burka area of Baghlan Province in northeastern Afghanistan, a traveler encounters a mosaic of people, languages, and customs. Along the Narin River in the lowlands, Pushtun settlers occupy the best-irrigated fields. On the small, dry plateaus nearby, Pushtun nomads pitch their black tents. Slightly higher, but drawing irrigation water from the same river, live Hazara settlers. Higher still, on a plateau without irrigation water, reside Uzbek horse and sheep breeders who summer on their mountain grazing sites in round felt yurts. Farther up, on the slopes of the gorges of the Hindu Kush, are the stone houses of Tajik gardeners, and in the mountains above them, at an altitude of nearly 9,000 feet, the Gujjar, who practice no agriculture, graze their goats.

The original inhabitants of the area were the Uzbek, but after the Afghan government had consolidated its power in Turkestan at the beginning of the twentieth century, other, non-Turkic groups slowly began to settle there. Now Narin-Burka contains the three main segments of Afghan society: nomads,

sedentary farmers, and city-bazaar communities, the economic and administrative centers where hand-crafted goods are made and imported goods and local produce redistributed. In the city-bazaars reside almost all government officers—the regional governor, the police chief, the military commandant, the tax collector, the chief justice, the regional school superintendent.

The area's local political leadership is represented by the chiefs, or *khans*, of groups of kinsmen that anthropologists call lineages. The chiefs compete endlessly among themselves for prestige and dominance in every area: wealth, tribal leadership, land, hospitality, entertainment, wisdom, insolence to government officials, owning the best *buzkashi* horses, and hiring the best *buzkashi* riders. *Buzkashi* is one expression of the chiefs' interminable rivalry, but the game itself can independently inspire antagonisms.

The office of chief is not hereditary, and there are no clear-cut rules of succession. Local chiefs actually have no well-defined political or judicial powers, yet their influence as brokers in political and economic matters is substantial. Chiefdom is based on wealth—usually amassed, sometimes inherited—and on a quality called *khazada*, literally, descendant of a chief. Within a particular lineage, practically all the rich, or would-be-rich, aspire to become chiefs.

*During a buzkashi match each rider, or chapandaz, tries to seize the buz, which means "goat" but is actually a calf carcass, and break away to score.*





This ambition harnesses an individual's entire energy and encourages ruthlessness and constant political scheming.

Once a man becomes a chief, he dare not lower his guard, for all chiefs compete against each other for supremacy, employing innumerable stratagems: stealing a rival's fiancée, burning his fields, purchasing evil charms to destroy his flocks, luring his clients with gifts and promises, keeping superbly decorated guesthouses, providing lavish entertainment, and most important, keeping the best *buzkashi* horses mounted by the best riders (*chapandaz*). Serious and often deadly rivalry is the essence of

Afghan social life, giving it a theatrical quality reminiscent of displays of wealth in West Coast Indian potlaches. Rivalry is by no means limited to the rich. According to one popular aphorism, "A woman is a rival of a woman, a shepherd is a rival of a shepherd, and a chief is the rival of a chief."

Traditionally, concern with horses and the associated *buzkashi* game was part of Turkic-Uzbek culture. Non-Turkic settlers in the Narin-Burka area quickly borrowed the main elements of this horse complex, which is now firmly entrenched in common regional culture. In Narin-Burka, people keep three kinds of horses. They never boast

of, indeed, rarely speak of, workhorses. Considered inferior animals, workhorses are used for loading goods, riding to the bazaar, operating oil mills, and very rarely, plowing. They are considered lowly animals and are often worked to exhaustion.

Narin-Burka's riding horses belong to a higher class. People know these horses as individuals and can describe all their characteristics: color, height, shape of head or legs, speed and endurance, past performances. Pushtuns have had a predilection for speedy riding horses, and one local tribe breeds them. In Pushtun areas of southern Afghanistan, ceremonial occasions



The chapandaz at far left clasps the heavy, awkward buz under his leg. Trying to make his way to the goal, he collides with another rider.

and Qul followed suit. As Wakil Abdulajan moved ahead, the lagging Haji Omar felt his prestige endangered, and shouted at Qul, "Catch this scoundrel; push my horse as fast as you can." Wakil Abdulajan's lead lengthened, and Haji Omar's anger grew accordingly: "Qul, dismount, you are shaming my horse, and you will see how I am going to catch that infidel." They changed horses, and mounted on his own mare, Qul overtook the rival. Although Haji Omar finished last, his prestige remained undiminished because his rival had been defeated. At any time, latent rivalries can inspire such contests.

The importance of *buzkashi* in chiefs' rivalries means that in Narin-Burka, horses bred for the game are highly prized animals. At a colt's birth, it is not allowed to touch the ground, lest "its wings be taken away." Generally, only stallions are used for games. During informal *buzkashi* games, a young horse is trained to dodge, attack, and respond to its rider.

In 1955, the Afghan Olympic Committee made traditional *buzkashi* an organized sport. This official form now has regulations governing all its aspects: who can play, team size, length and schedule of games, scoring, field size, breeding of *buzkashi* stallions, play-offs, and championships.

But village *buzkashi* has few rigid rules. Playing grounds, located near most villages and towns in Afghanistan's seven northern provinces, should be grass covered and free of rocks, to avoid hurting horses' hoofs. *Buzkashi* in Narin-Burka is a winter game; the season usually begins in the autumn, after the rainfall, and concludes shortly after the Muslim New Year's Day, March 21. If playing went on during Afghanistan's very hot summers, the horses would suffer and clouds

of dust from dry fields would blind the riders.

All summer the horses are kept in courtyards to rest, but in October they are taken out and exercised—at first for only a few minutes a day, but working up to progressively longer and faster trips. In Narin-Burka, their off-season diet is clover and barley, and in winter their ration of barley is much larger.

Late November brings the first, short *buzkashi* matches. Only in mid-December does serious *buzkashi* begin. Every Friday afternoon in the villages, the horseowners (who are *khans* of various ranks), the mounted *chapandaz* (rarely including more than a dozen active players), and a crowd of on-lookers gather on the game grounds. In one version of the game, the field itself has no precise boundaries. On one side stands a line of mounted horseowners, elderly and influential people, and government officials. In addition to these notables, several rows of spectators sit on the ground. In front of the elders is the goal, a circle about ten feet in diameter, outlined with gravel or sand. In the opposite direction, at a distance that depends on the field size and the number of horses, a pole is stuck in the ground.

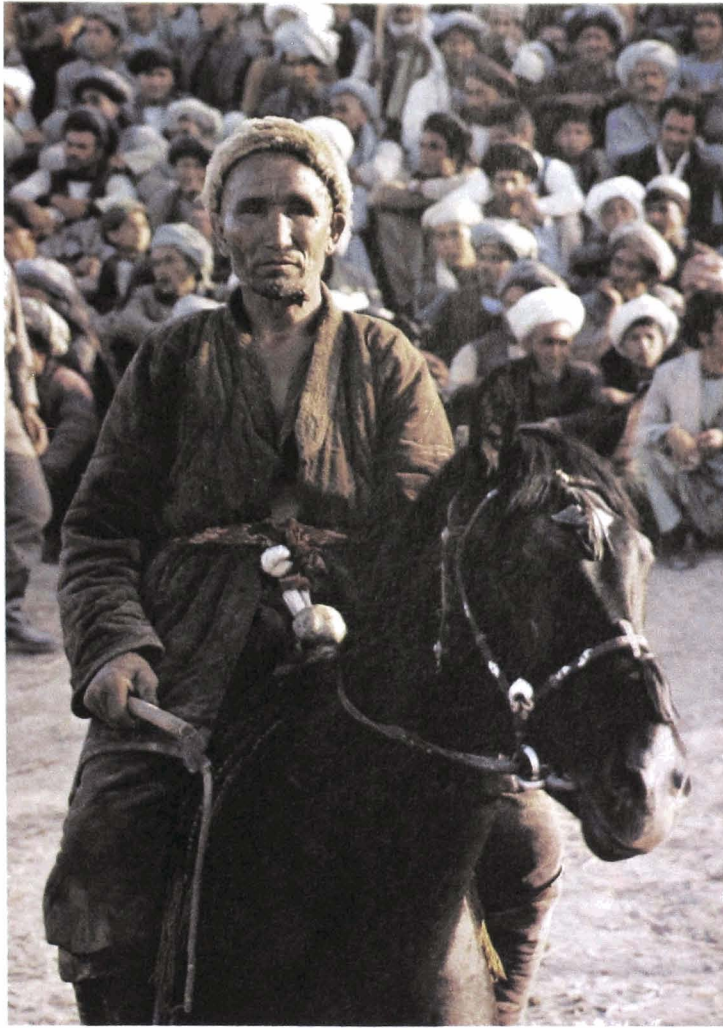
The game president (*rais*) places the *buz* in the goal. The *chapandaz* then struggle briefly until one of them manages to grab the carcass. The lucky horseman is then supposed to round the pole and return to the goal. If he manages to throw the *buz* inside the circle, he wins a point. En route, however, he has to face the other *chapandaz*, who try to take the *buz* away from him. The ensuing violent clashes are the game's *raison d'être*, the enactment of horseowners' political rivalries. *Chapandaz* say that the horses develop their own rivalries and will spontaneously bite and kick each other. This game may continue indefinitely, until the *buz* or two or three carcasses have been torn to pieces.

In Narin-Burka, most horseowners pay cash for their animals. The average price of a good workhorse is 3,000 afghanis (the exchange rate is currently forty-five afghanis to the dollar), while an

include formal horse races and spectacular equestrian exercises. Pushtun settlers in the north continued these practices until they were recently replaced by *buzkashi*. However, I came across one incident of a spontaneous race.

Haji Omar, chief of the Lakenkel lineage of the Pushtuns in Narin, was riding back from bazaar with his client Qul and his rival Wakil Abdulajan. Qul owned a mare of excellent reputation, which Haji Omar was riding, while Qul had mounted Haji Omar's sturdy stallion. Wakil Abdulajan was trotting near them when he suddenly pushed ahead. A race began. Haji Omar excitedly whipped his horse,





Each chapandaz is underwritten by a wealthy chief, who regards his rider's losses on the buzkashi field as a great blow to his honor.

exceptional buzkashi horse can sell for about 60,000 afghanis. Narin-Burka's buzkashi horses have long pedigrees. Some are bred locally, others purchased on the plains along the Amu Darya, northwest of Narin-Burka. Two influential Uzbek chiefs breed buzkashi horses, but only sell in distant regions where they can command high prices.

Some owners frequently change horses. Haji Omar once owned a

very good horse, apparently undefeated. His rival, Wakil Abdul-ajan, swore publicly to defeat the animal, and in the effort, he bought and sold over twenty horses. Only his death finally canceled his plan.

A chief places his buzkashi horse in the center of his large courtyard. When guests arrive, they see the horse first and comment eloquently on its virtues. The owner's swell of pride is great, but no greater than his shame when his horse has performed poorly on the field. One Afghan declared, "It is better to shoot a chief with a gun straight in his face, than to tell him loudly on the buzkashi field that his horse is weak and not fast enough." A chief will consult a shaman, who goes into trance to predict whether a

young horse will become a good competitor. Chiefs also pay other holy men fat fees for protective amulets that are hung on the horse's neck. Certain individual horses are famous not only in Narin-Burka, but all over northeastern Afghanistan. One is the undefeated "golden horse," whose pedigree supposedly originates in Samarkand. People say that after every success, the golden horse dances like a colt all the way home.

After the horse, the second important factor in buzkashi is the chapandaz. Chapandaz are recruited during informal local games, played without rais near villages. To earn a prize, a rider must seize the buz, and breaking free of the pack, ride away in any direction. Young boys enter these games, observing the methods of experienced chapandaz, who are not considered ripe until their mid-thirties or early forties, and who frequently compete in their fifties. The older chapandaz casually instruct the boys. Chiefs stand by, on the lookout for agile recruits.

A chief spares no expense to secure the finest animals; he also safeguards his prestige by going after the best riders. Usually, every chapandaz is attached to a particular chief, who offers him gifts and protection.

Relations between chapandaz and chief are always cordial and friendly. A careful chief wants his chapandaz to have the best available equipment. Before the buzkashi season opens, the chapandaz receives a fine new coat, a fur hat, and woolen socks. On the playing field, as soon as the chapandaz has scored a point, the chief announces his gift or prize—usually money, occasionally a turban. His whip raised high to call attention to his score, the chapandaz rides forward to take his prize as the onlookers leap to their feet, cheering his name. During the season, the chapandaz receives additional presents of grain and money. One wealthy chief was so fond of his chapandaz that he gave him his daughter in marriage.

Unless he is a close relative of the chief, the chapandaz does not supervise the daily care of the horse or horses that he habitually rides.





Chiefs believe that only kinsmen can take proper care of horses. Nor does a *chapandaz* ride only his master's animal. During a game, he will ride one horse for no more than ten or fifteen minutes. Then the horse is allowed to rest, and the *chapandaz* mounts horses belonging to his master's kinsmen, political allies, and clients. These horses stand saddled near the field and are brought to the *chapandaz*, who may accept or refuse freely. *Chapandaz* may even mount horses belonging to their master's rivals, although during important regional games such behavior might be considered bad taste. In the Burka area, only one *chapandaz* receives a regular salary from his master, and therefore is not allowed to mount a rival's horse.

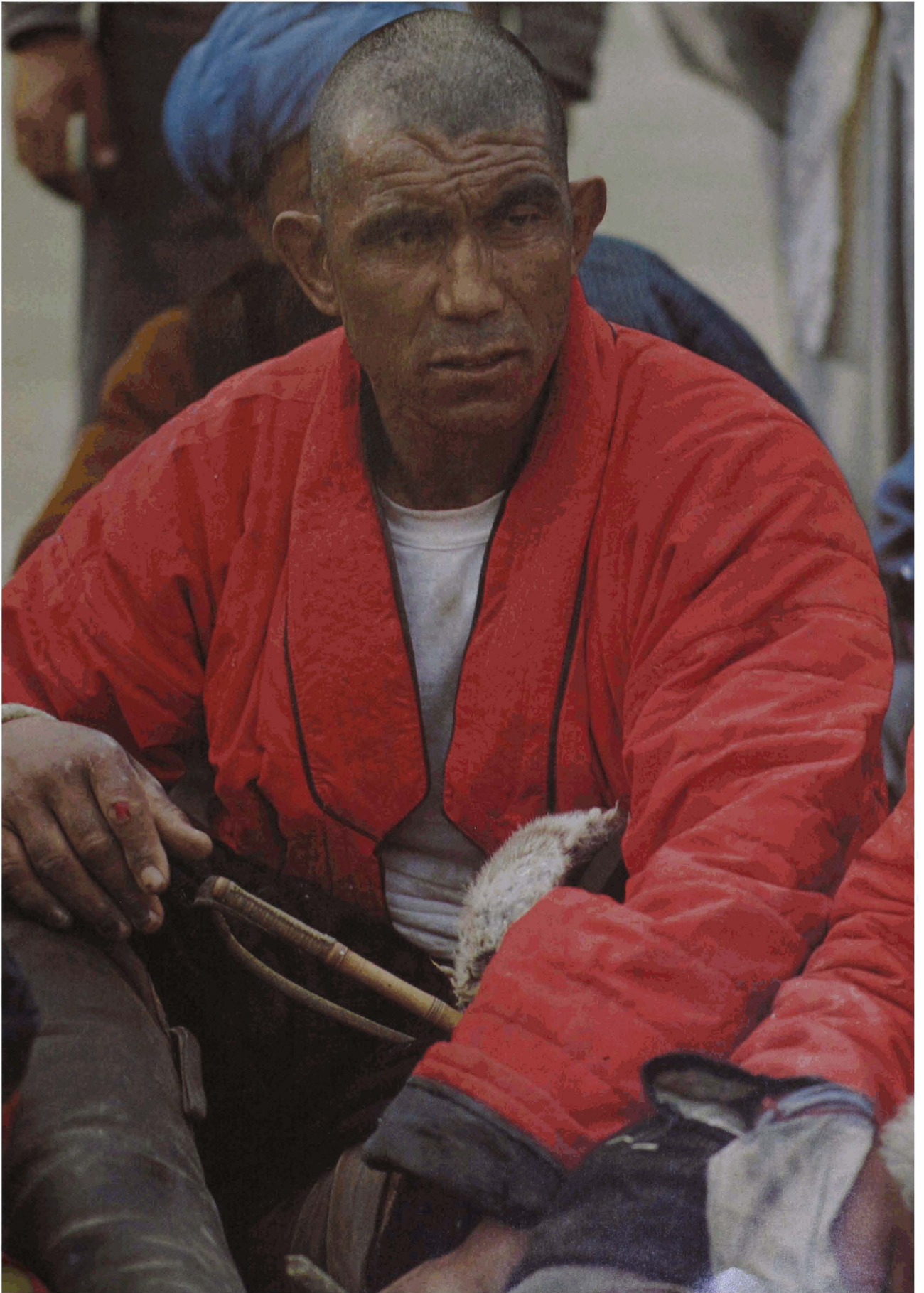
The chief must also watch over his rider's safety, for *chapandaz* are rivals to each other by definition. In principle, every *chapandaz* struggles alone and competes with all other *chapandaz* in the arena. In

*Above, turbaned spectators on the sidelines cheer their favorite riders. At right, a chapandaz, who has made off with the buz and scored, proudly shows off his prize of a quilted coat and a bag of soap.*

actual fact, *chapandaz* form three kinds of coalitions. Some outstanding riders become so well known that they travel to Kabul, the capital, to play before the president. These players adopt haughty attitudes befitting stars, and acquire young admirers, who act as their satellites on the playing field, collaborating in game strategy.

A second kind of coalition reflects a chief's political alliances. If he is powerful, he can surround himself with lesser chiefs, whose *chapandaz* support his own riders. During regional games, *chapandaz* from the same tribe will align them-





selves in a third type of coalition. Uzbek *chapandaz* will help each other against Hazara and Pushtun riders, and vice versa.

In the arena, a coalition of *chapandaz* may use all sorts of tricks to foil a dangerous rival. When he bends down to grab the *buz*, several horsemen may make their horses rear to strike him as he heaves himself up. As he rushes toward the goal, *buz* in hand, his enemies may cause a collision. Under these circumstances, the chief can scream, announce irregular behavior, and call for the intervention of the *rais*. He may also resort to lobbying, passing gifts of money among other *chapandaz*, and eventually establishing an ad hoc countercoalition.

In Narin-Burka, two ethnic groups, the Awkhana Pushtuns and the Kogaday Hazara, practice onepmanship by making extravagant efforts to recruit talented riders. For a long time, the Kogaday were far superior, thanks to three outstanding *chapandaz*, Jabar, Bazmir, and Bazmir's brother, the great Bazgul. Bazgul was extremely arrogant, respecting nothing and no one, not even the Pushtun elders. He and the other two Kogaday inflicted defeat after defeat on the Pushtuns, until they could not even touch the *buz*.

Haji Omar, chief of the Pushtuns, could no longer endure this humiliation and declared that something had to be done. In council, the elders decided that buying better horses was not the answer, and that the only feasible strategy was to break the coalition of the three Kogaday *chapandaz* by attracting one to the Pushtun side.

Since Bazmir and Bazgul were brothers, they were considered incorruptible. So the Pushtun *chapandaz* brought Jabar presents, invited him to feasts, slaughtered fat sheep in his honor, and flattered

*Horse whip and fur cap in hand, a chapandaz takes time out from the field, where his opponents will try any number of brutal tricks to keep him from the buz.*

him, saying that they wanted him to teach them. For Jabar, this was a dangerous proposition: if he accepted, the Kogaday reprisals would be terrible. At this point, the Pushtun elders intervened and offered Jabar full protection, cash compensation for any losses, and in the event of a fight or feud, the support of the whole Pushtun lineage, guns in hand.

The strategy worked: Jabar joined the Pushtun *chapandaz*, pulled the *buz* from Bazgul's hands, and saved the honor of the Pushtuns. Heartened, Paindamangal, another Pushtun *chapandaz*, started using tricks against Bazgul. Paindamangal would lock the leg of the *buz* against his stirrup and place his foot so that Bazgul could not pull the *buz* out. While in full gallop, Paindamangal would counter Bazgul's pull by sliding down the horse's opposite side, right under its belly. The Pushtuns say that since then Bazgul has behaved like a normal human being.

Because the reputations of *chapandaz* go up and down, even the greatest live in fear of enemies, injuries, and bad luck. They frequently visit the shaman to ask the outcome of forthcoming games, and to learn whether their rivals have strong protective talismans or some evil medicine that will bring misfortune. In trance, the shaman calls his spirit protectors; with their help, he tries to "raise the star" of a *chapandaz*, to make him feel strong and confident. If the strongest magic is invoked, the *chapandaz*'s rivals in the arena may suddenly see him as an enormously powerful giant.

During play, the chief can do little except watch, pray, curse, and perhaps award prizes. But *buzkashi* could not exist without wealthy chiefs. Year round, chiefs breed, buy, and sell horses, lavish them with care, try to attract the ablest *chapandaz* and secure their loyalty, provide horses and riders with the best gear. Since these are expensive projects, *buzkashi* is an aristocratic game, a political strategy. If one chief's prestige begins to approach another's, the two automatically become *buzkashi* rivals.

One great Pushtun chief in Narin,

Arbab Jonmamat, married his son to a girl from a village near the bottom of Awkhana valley. The girl's family gave a feast in their house, but did not invite the Lakenkhel lineage. Its chief, Haji Omar, saw a chance to avenge this insult when the wedding procession, which brought the bride to her husband's house, had to pass through his territory. The procession was preceded by a group of *buzkashi* players, kinsmen of the bride and bridegroom. Throughout the singing and merrymaking, the riders played informal *buzkashi* continuously.

When the joyous procession reached Lakenkhel, Haji Omar ordered his *chapandaz* to bring their horses and capture the wedding party's *buz*, which they did easily. Jonmamat hurried over and begged them not to ruin the feast and to return the *buz*. After waiting long enough to humiliate Jonmamat, the Lakenkhel returned the *buz*. When the game resumed, the Lakenkhel again attacked and took the *buz*. This time, they refused to return it.

Besides the chiefs, the other members of a *buzkashi* audience are also important to the game. This audience is hardly passive. Varied ethnic groups and members of different lineages, each supporting their own *chapandaz*, will scream, shout, encourage, and criticize. Galloping horses may overrun the semicircle of onlookers, wounding some. If a quarrel breaks out among *chapandaz*, the spectators immediately join in, and as sticks and stones fly in all directions, a general battle begins. *Buzkashi*'s violence brings to mind medieval tournaments.

In recent years, *buzkashi* games have become more frequent. At the end of the nineteenth century, during the last part of Afghanistan's feudal period, tribal chiefs faced a weak central government, and fought continually among themselves for supremacy. Since the beginning of the twentieth century, the central government has gradually grown stronger. Simultaneously, *buzkashi* has replaced actual warfare as the most visible manifestation of the chiefs' political ambitions. □