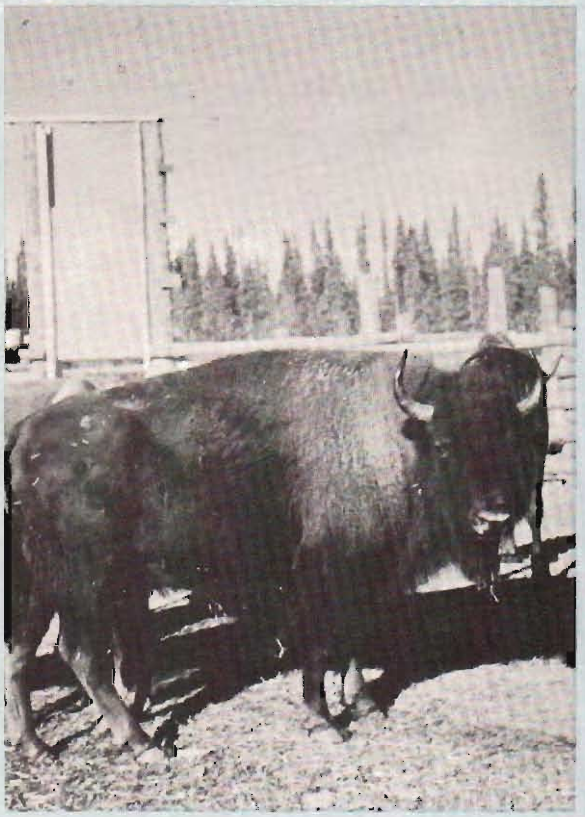

BISON MOVE—Bison were first transplanted to Delta, Alaska from Montana in 1928. Subsequent transplants from the original herd have established populations at other interior sites.

ELK CALVES—Attempts have been mad to Kruzof, Afognak, Revillagigedo and C Only the Afognak transplant succeeded, elk apparently still live on Revillagigedo

ALIEN ANI

By Loyal Johnson
Game Biologist
Sitka

MAN'S RELOCATION of plant or animal species into areas where they do not occur is generally called transplanting. Transplanting is one of the oldest technique used in wildlife management, except of course for restricted harvests. It is probably also the most often suggested by the public and is the technique with the most impact on native flora and fauna. It is the most dramatic, the most abused and certainly the one which shows the poorest ratio of successes to failures. By success, I am generally referring to whether the introduced species becomes established.

Transplants can be broadly separated into two categories, accidental and planned.

Let's examine a few transplants and see how they came about. Considering transplants of all wild creatures, probably more "successful" transplants have happened by accident. Few Americans today realize that such familiar creatures as the common house mouse, the Norway rat, the German cockroach, the clothes moth, many varieties of agricultural pests, most human "vermin" (lice, mites, etc.), and indeed, most viral and bacterial forms which cause most of our health problems were introduced into North America by the white man.

Also accidentally introduced have been numerous plant species which have had a marked effect on the North America continent.

The second category of introduction and the one of most concern to the game manager is the planned transplant.

One of the oldest and certainly one which resulted in widespread distribution of the introduced species was the starling. Eugene Scheifflin was a New Yorker whose hobbies included amateur ornithology and the study of Shakespeare. He combined these two hobbies into the bizarre idea of importing into America all birds mentioned by Shakespeare. He was successful with the starling as that bird has spread from its original site of release in New York City in 1880 to all states of the union (except Hawaii). Today the starling is responsible for millions of dollars of crop damage annually.

le to transplant elk
Gravina islands.
although some
Island.

MOOSE BOOST—Moose transplanted from Southcentral Alaska to Berners Bay near Juneau in 1958 and 1960 have reproduced and permit hunts are now held there each year.

ADFG photos

MALS

The Story of Transplants

The English sparrow is a similar pest familiar to many Alaskans although it has not become established here. It was first released in Brooklyn, New York, in 1850 and is now present in all the lower 48 states. It was transplanted to America by Europeans simply to remind them of their homeland. Similar importation of all manner of European and Asian forms, mostly songbirds, followed and there are records to indicate that through 1940, at least 44 species of nongame birds have been released in the United States.

Because of their great variety and relative ease of capture and transport, game birds have received a great amount of transplant attention. Foremost among these have been the various species of pheasants. Early Romans carried them from the Orient at a time now lost in history. Stock from the Roman Empire was in turn transported to the British Isles, supposedly at the command of Julius Caesar. Englishmen thus became aware of the sporting and table qualities of the pheasant and the transplanting of their sport to the New World was only natural. Records indicate the first release of pheasants in America occurred around 1730.

Efforts to establish pheasants were unsuccessful, however, until the U. S. Consul General in Shanghai, Owen N. Denny, established them on his farm in Oregon's Willamette Valley in 1881. They flourished and by the early 1900s had spread or had been retransplanted all across the nation. For unknown reasons they have never become successfully established in the Southeastern states.

Practically every species of game bird has been transplanted but, except for the ring-necked pheasant, only the Hungarian and chukar partridges have become successfully established in North America. All attempts to transplant grouse have ended in failure.

Alaska has not been without its attempts to transplant game birds, but all efforts were unsuccessful. Pheasants of one variety or another have been released at Juneau, Sitka, Baranof and Goddard Hot

(continued on pg. 12)

cont'd from page 11

Springs, Ketchikan, Cordova, Matanuska Valley, Fairbanks, Petersburg, Kenai Peninsula, Wrangell and Haines. The Alaskan environment just doesn't seem to be suited to pheasant survival, probably because of the adverse climate and lack of widespread agriculture, namely grain crops.

Chukar partridge and bob-white quail have also been unsuccessfully released in Alaska.

There have also been several attempts to transplant within Alaska two species of native grouse. Between 1957 and 1964, blue grouse from Southeastern Alaska and spruce grouse from the Kenai Peninsula were relocated to Kodiak Island. None of the transplanted birds are known to be surviving today.

Small game species have been moved around the world in an equally haphazard fashion. Especially attractive to the animal movers were various furbearers such as mink, fox, muskrat, beaver and nutria. Where they have become established they generally have had considerable impact on native species.

For example, the United States Fish and Wildlife Service is currently attempting to reestablish the Aleutian Canada goose on the Aleutian Islands of Amchitka and Agattu. This rare and very localized form of the Canada goose was nearly exterminated by blue foxes which were transplanted onto those islands during the fox ranching craze.

Probably the most abused transplants have been those of the European rabbit and mongoose. They both have caused serious damage, especially in Australia. Fortunately, these species have not become widely established in the United States.

Fur animal and small game transplants in Alaska have included foxes, muskrats, beaver, marten, mink, sea otter, raccoon, red squirrel, marmot, ground squirrel, wolf, hares and rabbits. Most of these involved relocating native species and when taken to logical locations they survived.

Fish, too, have been transplanted over the world since early times. In general, transplants of fish have been more successful than mammals and birds. Trout of several species, including browns, rainbows, eastern brook, several species of salmon and many varieties of warm water or pan fish such as bass, crappie, etc., have been stocked in a variety of areas. All has not been to the good with fish transplants, however. Over much of the western United States, the introduced rainbow and brown trout have generally displaced the native Dolly Varden, cutthroat and grayling. Carp, which were introduced by the United States government starting in 1877 as a food fish, are widespread and in recent years, the walking catfish has become a problem introduction in the Southeastern states.

The transplanting of big game species is, with few exceptions, a fairly recent innovation, due perhaps to the wide variety of native big game species present in North America and perhaps to the difficulty of capturing and transporting stock.

Bison were among the first large wild mammals to be relocated when the famous National Bison Range near Missoula, Mont. was established. Elk were another early favorite to transplant, with many hundreds having been removed from Yellowstone Park to various points in the lower 48.

In recent years, most transplants of big game animals have been to establish herds in areas which animals apparently couldn't reach on their own, as with mountain goats to the Dakotas and Colorado, or to areas from which they have been locally exterminated, as with big horn sheep throughout the western states.

It is rather strange that with our large and varied big game species, Alaska would receive so much transplant activity, yet the history of the state is replete with a staggering array of big game transplants.

The first transplant was in 1916 when Sitka black-tailed deer were moved from the Sitka area to Hawkins and Hinchinbrook islands in Prince William Sound. Successive transplants through 1923 bolstered the original releases. The deer prospered and soon

ADF&G photo

SEA OTTER TRANSPLANT—Sea otters have been successfully transplanted from Aleutian Islands to previously inhabited areas of Southeastern Alaska.

Loyal Johnson holds a B.S. degree in biology from the College of Idaho and an M.S. degree in wildlife management from the University of Montana. He joined the department in 1964.

ADFG photo

TRANQUIL OX— Tranquilized musk ox awaits transplant from Nunivak Island to mainland. Success of two musk ox transplants has not been determined.

spread to other islands and the mainland. Hunting for bucks only started in 1935. The deer continued to thrive and exceeded the carrying capacity of their limited habitat. The severe winter of 1948-49 killed thousands of deer. Since then, the Prince William Sound deer herd has leveled off and supports an annual harvest of 1,000-1,500 deer.

Flushed with the success of the Prince William Sound deer transplant, and in keeping with the transplant mania of the times, a whole succession of transplants were made. Deer were released at six additional locations, bison were introduced from Montana, elk were transplanted in three locations, muskoxen were reintroduced, mountain goats were tried in three locations, moose were released at five different locations, and in recent years Dall sheep and caribou have been transplanted. Even yak were tried in Interior Alaska.

Some of these transplants were logical, the animals survived and viable populations became established. Others, which were poorly planned or poorly executed, failed.

In this writer's opinion, the only justifiable big game transplants are: (1) those of resident game species into isolated areas which they have been unable to reach on their own (examples of successful transplants of this type were moose to the lower Copper River Valley, deer to Prince William Sound and Kodiak and goats to Baranof Island); and (2) reintroduction of native species into areas from which they have become extirpated, such as caribou to the Kenai Peninsula and sea otters to Southeastern coastal waters.

In no event should transplants be made where there is likelihood of competition — whether for food or space — with native species. Elk transplants into deer habitat fall into this category. Additionally, since transplants are done with sportsmen's dollars through Federal Aid in Wildlife Restoration funds, they should afford the sportsmen some return for his investment.

What is the future of transplants in Alaska? The Department of Fish and Game believes that the state's game ranges are currently stocked with an adequate number and variety of native game species, and that further transplants are not necessary. This is especially true where transplants are proposed which would only serve to extend the range of a species to an area where it probably wouldn't be utilized or to transplant a species, especially a non-native, to an area simply because it isn't there.

In Alaska, transplants have succeeded in establishing some huntable species where none occurred previously. Yet we don't know the effect on native species produced by the buffalo at Big Delta, Copper River and Healy or on caribou by reindeer. We can speculate that the present low numbers of grouse and ptarmigan on Baranof and Chichagof islands are the result of marten and red squirrel introductions. Experience from Oregon, Idaho, Montana and Washington shows that where deer and elk occur on the same winter range, deer come off second best. There's no reason to believe that our deer would be better able to compete with elk.

The wisdom offered by an early animal ecologist named Elton makes a great deal of sense: If a species could get to an area, could live in that area and could reproduce in that area, it would already be in that area.

More detailed information on Alaska's transplants is found in a recent Department of Fish and Game publication entitled, "Game Transplants in Alaska." Worldwide transplants are well described in an easily read book by George Laycock entitled "Alien Animals," published by The American Museum of Natural History. •

Alaska

FISH tales & GAME trails

JANUARY - FEBRUARY 1975

ALASKA DEPARTMENT OF FISH AND GAME