A PROGRESS REPORT ON BEAVER MANAGEMENT IN CALIFORNIA[1]

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Introduction

Those who have been acquainted with beavers in California during the last decade find it difficult to realize that in their present numbers they are only a remnant of a once great population that played an extremely important role in the early exploration and development of this State.

The purpose of this paper is to review briefly the history and present status of beavers in California and to discuss the steps that are being taken to develop a plan of management for the five kinds of beaver now to be found in the State (see Fig. 20). There are the three native beavers, the Shasta beaver (*Castor canadensis shastensis* Taylor), the golden beaver (*Castor canadensis subauratus* Taylor), and the Sonora beaver (*Castor canadensis repentinus* Goldman), and two nonnative races, one from Idaho (*Castor canadensis taylori* Davis), and another from Oregon (probably *Castor canadensis pacificus* Rhoades). The latter have been introduced into the State during recent years by the U. S. Forest Service and the Division of Fish and Game.

For much of the material pertaining to the history, distribution, and present status of beavers in California, the writer has drawn heavily on a report recently published by the Museum of Vertebrate Zoology of the University of California and the Division of Fish and Game in cooperation with Federal Aid in Wildlife Restoration Project California 2-R (Tappe, Donald T., The status of beavers in California. Game Bulletin No. 3, State of California, Division of Fish and Game, pp. 1-59, 26 figs. 1942).

The author wishes to express his sincere appreciation to Howard Twining and Donald T. Tappe, co-workers with him in beaver management, who would have collaborated with him in the preparation of this paper were they not in the armed forces. Thanks are also due to the many other employees of the Division of Fish and Game, particularly those members of the Bureaus of Game Conservation and Patrol who have suggested planting sites and assisted in trapping and transporting beaver, and to Gordon H. True, Jr., of the Bureau of Game Conservation who assisted in the preparation of this report.

History of Beavers in California

The exploitation of California beaver, which began early in the nineteenth century, was at first limited to sporadic trapping expeditions on the part of individual groups of "mountain men," but soon this new source of beaver skins attracted the attention of the large trading com-

[1] Submitted for publication, January, 1946.

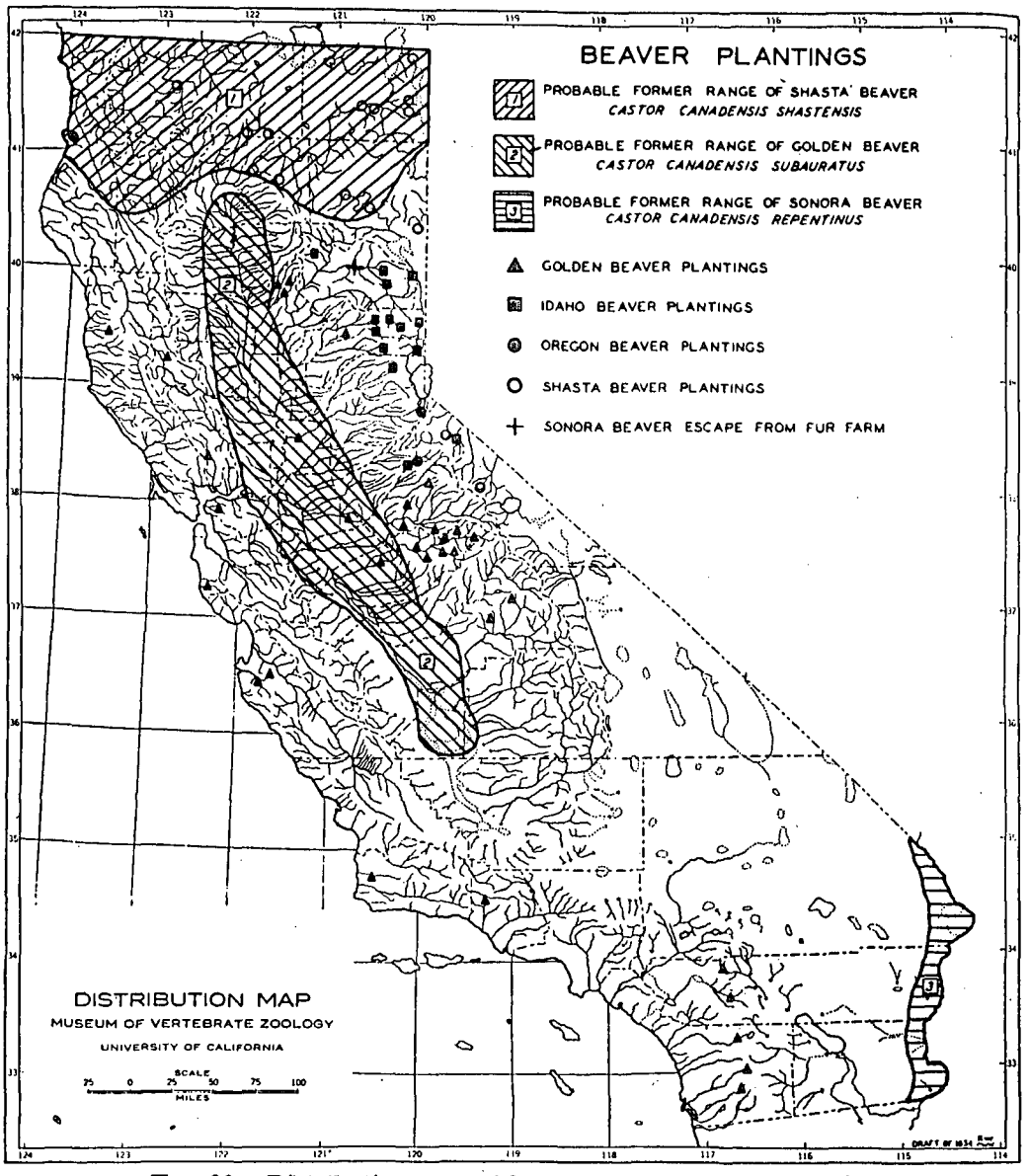

FIG. 20. Distribution map of beaver plantings in California.

panies, particularly the Hudson's Bay Company. These companies sent into California well-organized "fur brigades" that systematically trapped the available beaver territory until about the middle of the century when it became no longer profitable.

James Ohio Pattie, who, with a party of seven, trapped the Colorado River in 1827, was probably the first to enter what is now California in search of beavers. A year later, in 1828, Jedediah Smith entered the Great Valley and traversed its length as far as the present site of Red Bluff, taking beavers on the American and Feather Rivers and on Butte Creek. He also found them in goodly numbers along the Sacramento River in the vicinity of Stony Creek, Deer Creek, and Toomes Creek. Smith also visited the Trinity and Klamath Rivers finding beaver signs near what was apparently the mouth of the latter.

The Hudson's Bay Company first sent an organized "fur brigade" into California in 1828. This group of trappers, under the leadership of

Peter Skene Ogden, trapped in the Great Valley during the winter of 1828-29 and returned to the Hudson's Bay Company headquarters at Fort Vancouver with a fine collection of pelts. Ogden also visited the upper Klamath and Sastise (Shasta) Rivers, and, according to his journal, apparently found beavers in both streams.

In 1832, another Hudson's Bay Company "brigade," under the leadership of John Work, was sent to California (Maloney, Alice Bay, Fur brigade to the Bonaventura. Special Publication No. 19, California Historical Society, pp. 1-112, 5 ill., Westgate Press, Oakland, 1945). The party crossed the present northern boundary of the State near Goose Lake and followed the Pit River to its junction with Hat Creek, taking a number of beavers along the way. The route then followed Hat Creek eastward for a short distance, crossed the Cascades between Burney Mountain and Stony Butte, and entered the valley of the Sacramento by way of Cow Creek. Work's party trapped the Great Valley as far south as the mouth of the Stanislaus and explored the San Francisco Bay region and the north coast from Fort Ross to Tenmile River.

It is interesting to note that Work reports a total absence of beaver in north coast streams such as the Gualala and Tenmile, in spite of the fact that they appeared well adapted for them (Maloney, 1945, pp. 45-50). Although Work visited the north coast during the rainy season, he advanced the theory that the absence of beavers might be due to the fact that the coastal streams "take their water not far off in the first range of Mountains and that there is [probably] little or no water in them during the dry season" (Maloney, 1945, p. 47). We are faced with precisely this same situation today in attempting to establish beavers in that part of the State.

After this unsuccessful visit to the north coast, Work's party returned to the valley and traveled south into the lower end of the San Joaquin. In the delta region, Work's trappers found the beavers shy and difficult to trap due to the effect of the tides. These same difficulties are met by trappers today.

Work's journal states that another Hudson's Bay Company party, under the leadership of Michel Laframboise, was trapping beavers in California during the winter of 1832-33 and that at least one party of Americans was also encountered. It is very evident that, even at that early date, the beaver population was showing evidence of depletion.

The power of the Hudson's Bay Company began to wane about 1839 when General Sutter, who was also interested in the fur trade, induced the government to impose an export tax on beaver pelts. This act, coupled with the fact that beaver were becoming scarce, made trapping so unprofitable that by 1845-46 the Hudson's Bay Company had ceased trapping operations in California.

During the last half of the nineteenth century individual trappers continued to take beavers in California with varying degrees of success. Unrestricted exploitation continued until 1911, when beavers were first afforded protection.

History of Beaver Legislation

Legislation pertaining to beavers was enacted for the first time in California in 1911 when, realizing that the beaver population was facing certain extermination, the State Legislature enacted a law providing com-

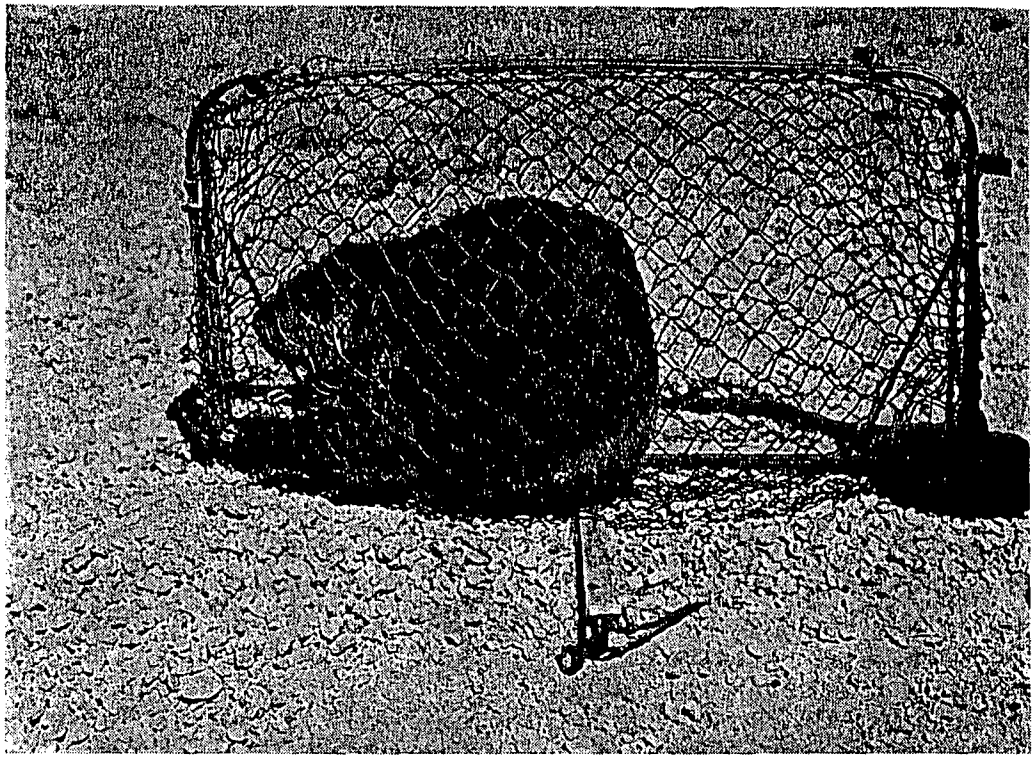

FIG. 21. Bailey live trap with captive Shasta beaver. August 28, 1940.

plete protection. This law remained unchanged until 1917, by which time beavers, particularly in the delta region, had increased in numbers to a point where they were becoming a menace to reclamation works. The law was then amended to provide for the trapping of nuisance beavers under permit from the Fish and Game Commission in cases where the safety of levees and other reclamation works was being threatened. This law was still further liberalized in 1925, when it was amended to permit the trapping of beavers and the possession of pelts in Fish and Game Districts One, Two, and Three.

Due to the fact that in 1925 beavers were not legally defined as fur bearers, the legislation enacted in that year had the effect of making it possible to trap them in the districts involved at any time of the year. It was not until two years later that this mistake was corrected. Meanwhile, wholesale trapping brought about rapid reduction of the beaver population and by 1933 the situation had become so alarming that beavers were again placed on the protected list, with the added provision that nuisance beavers could be taken under permit where satisfactory evidence of damage, actual or threatened, was presented.

Under protection, the beaver population curve once more began to climb until, by 1939, owners and operators of reclaimed delta lands were clamoring for relief again. In response to their demands, the 1939 Legislature added a new provision to the beaver laws requiring the Fish and Game Commission to establish beaver control in areas where it could be demonstrated that beavers were damaging or threatening to damage or destroy lands, crops, levees, or other irrigation structures. The commission was required to define the boundaries of such areas and to promul-

gate the rules and regulations under which the nuisance beaver could be taken. There has been no change in the laws pertaining to beavers since 1939.

Beaver Investigations

In 1940, the Museum of Vertebrate Zoology of the University of California and the Division of Fish and Game, in cooperation with Federal Aid in Wildlife Restoration Project California 2-R, began a survey to determine the status of beavers in California. The main objectives of this study were: To determine the numbers of beavers in California and the location of existing colonies of both native and introduced varieties; to ascertain the habitat requirements of beavers in California; to learn as much as possible of their economic status; and to obtain information that might provide a basis for a beaver management plan.

The report published upon completion of this survey (Tappe, 1942) indicated that there were probably no more than 1300 beavers in the State at that time, the Shasta beavers and golden beavers, in particular, occupying only a small fraction of their original ranges. The report stated that in spite of the fact that California beavers can not be reestablished throughout much of their former range because of the inevitable conflict with agriculture, there still exist many opportunities for beaver range extension without interfering with the interests of the farmer.

Following the publication of this report, it was considered advisable to begin immediately an experimental beaver transplanting program aimed not only at the restoration of beavers in portions of their former range, but the extension of beaver range into suitable areas not previously occupied. Federal Aid in Wildlife Restoration Project California 5-R, "A Survey of the Fur Resources of the State of California," a project which up to that time had been devoted to the investigation of fur bearers other than beaver, was consequently amended in 1941 to provide among other things for a survey of the State to determine the location of suitable sites for beaver colonies, and for a limited amount of experimental transplanting. One of the principal objectives of this study was to explore the possibility of successfully transplanting golden beavers from their native range on the valley floor to coastal streams and to those draining the Pacific slope of the Sierra-Nevada. Another objective was to continue the investigation of the status of the Sonora beaver along the Colorado River and in adjacent irrigated areas.

The results of the transplanting experiments were so satisfactory that, in 1945, it was decided to go one step further and initiate a large scale beaver transplanting program.

Beaver Transplanting

Prior to entering into a general discussion of the beaver transplanting program that has been carried on by the Division of Fish and Game with Federal Aid funds since 1941, mention should be made of the beavers that were planted by both the U. S. Forest Service and the Division of Fish and Game between 1934 and date of inception of the present program (see Table 1).

In 1934, the U. S. Forest Service made two plantings of Idaho beavers, one in Plumas and another in Tuolumne County. In 1938 they

FIG. 22. Bailey live trap being set in place.

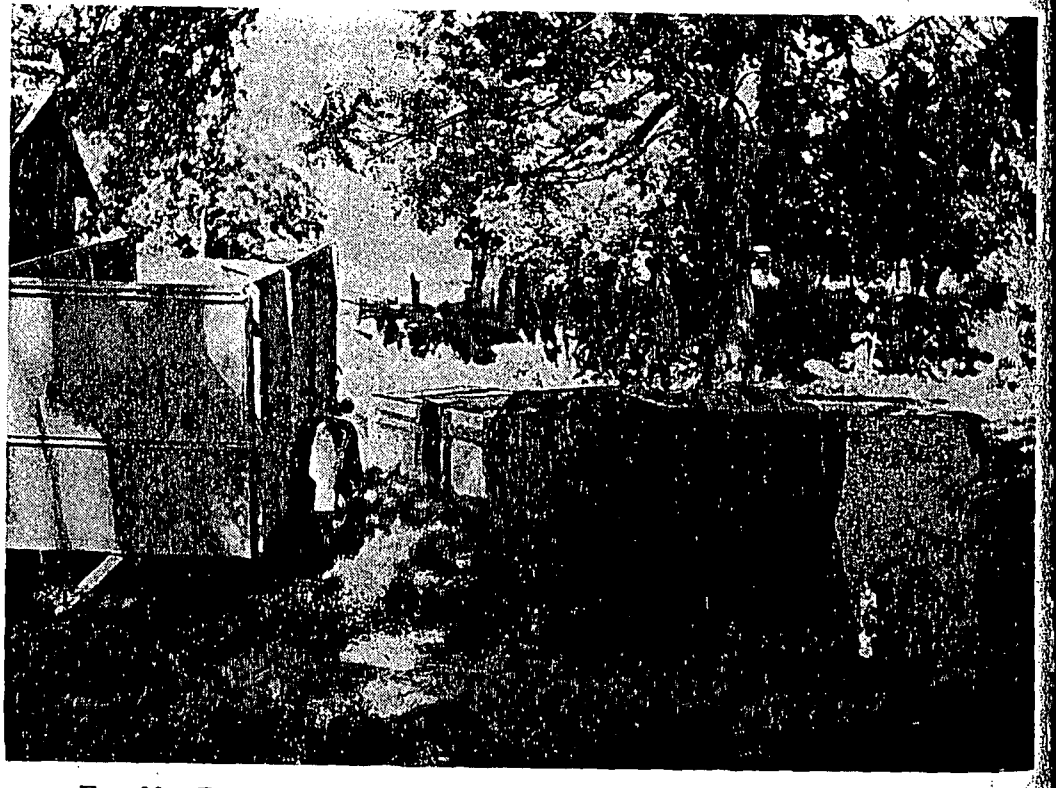

FIG. 23. Beaver transplanting equipment. The trailer formerly in use is in left foreground, shipping boxes in the background, and the holding pen in the right foreground. September 25, 1941.

planted two pairs of Oregon beavers in El Dorado County and two in Tuolumne County. The Plumas County plant was particularly successful and has since served as a valuable source of stock for transplanting elsewhere on the Plumas, Tahoe, and Mono National Forests. Also, migrants from this same colony have established other colonies in the immediate vicinity without the assistance of the transplanting crew. In addition to introducing nonnative beavers from Idaho, the Forest Service made several plants of native Shasta beavers in Modoc and Siskiyou Counties (Table 1).

All of the golden beavers that were transplanted between 1938 and 1941 were nuisance beavers taken from the Sacramento and San Joaquin Valley regions and planted in coastal streams at low elevations.

When the experimental transplanting program under Project 5-R was first contemplated, the project staff corresponded with the game departments of other western States that have had experience in beaver management for the purpose of securing information on methods of live trapping and kinds of equipment used in transplanting beavers. These were tested and the ones that were found to be geared to California requirements were finally adopted (see below) for use by the present beaver transplanting project, Federal Aid in Wildlife Restoration Project California 18-D.

Experimentation with various types of automotive equipment has finally demonstrated that a three-quarter ton stake-side truck with a four-speed transmission is the best for transporting beaver trapping and transplanting equipment over the steep, rough roads that must necessarily be traversed in this work. Power, load capacity, and high clearance combine to make it the ideal vehicle, far superior to the cumbersome trailer formerly in use (Fig. 23).

In trapping beavers it is essential that a live trap be employed. During early trapping operations in the delta region, steel traps were used and it is estimated that at least 75 per cent of the animals taken by that method perished after transplanting. Since the live trap has been standard equipment, losses have been negligible.

The Bailey live trap (Figs. 21 and 22) now in use is sturdily constructed and may be depended on to operate with a minimum of failures. It is light in weight, about 35 pounds, and is consequently easy to handle and transport. It is constructed so as to be adapted to a wide variety of sets, being far more versatile in this respect than the ordinary steel trap. If the live trap is set carefully and visited frequently, at least once in the morning and again before dark each day, there will be practically no trapping fatalities.

The removal of the beaver from the live trap must be done with care in order to prevent injury to the animal, the trapper, or both. To facilitate this operation the California beaver trapping crew makes use of a contrivance consisting of a circular piece of ½″ galvanized pipe, 12″ in diameter, fitted with a 4′ wooden handle. Spaced at regular intervals around the inner circumference of the pipe are four hooks from which an ordinary 100-pound burlap bag is suspended to form a net. When removing a beaver from a trap the net is placed directly opposite the opening of the upended trap with the sack extended. The trap is then opened slowly and the beaver will usually crawl directly into the dark-

ened tunnel formed by the sack. It is then an easy matter to pick the animal up and transfer it from the sack to the shipping box. The alternative method, that of picking the beaver up by the tail and holding the wriggling animal at arm's length, is a hazardous one and not to be recommended.

The shipping box (Fig. 23), 24″ x 44″ x 24″ in size, is made of 20-gauge galvanized sheet iron braced around the top with 1″ x ⅛″ angle iron. Additional support is provided by 1″ x 4″ wooden pieces bolted to the sides and 2″ x 4″ pieces on the bottom of the box as shown in the illustration. The box is fitted with a divided lid of hardware cloth stretched on iron frames. Adequate ventilation and drainage apertures are provided in the sides and bottom. Each box will accommodate from four to six adult beavers or from eight to twelve kits. In transit, the bottom of the box is cushioned with a layer of damp leaves, hay, or burlap, which serves not only to absorb road shock but to keep the tails and feet of the beaver moist, an essential to their survival. When the trapping crew is moving camp and the boxes are empty of beaver, each box will hold six Bailey live traps nested together.

A portable holding pen (Fig. 23) is used to contain beavers during the short interval that frequently intervenes between trapping and transplanting operations. This pen is 4′ x 6′ x 44″ in size. It is made of 20-gauge galvanized sheet iron braced with 1″ x ⅛″ angle iron and so constructed that it may be taken apart for shipment. It has no top or bottom. When in use it is placed on a piece of chicken wire slightly larger than the pen. This effectively prevents the beavers from digging out. A heavy tarpaulin is placed over the top of the pen for shelter

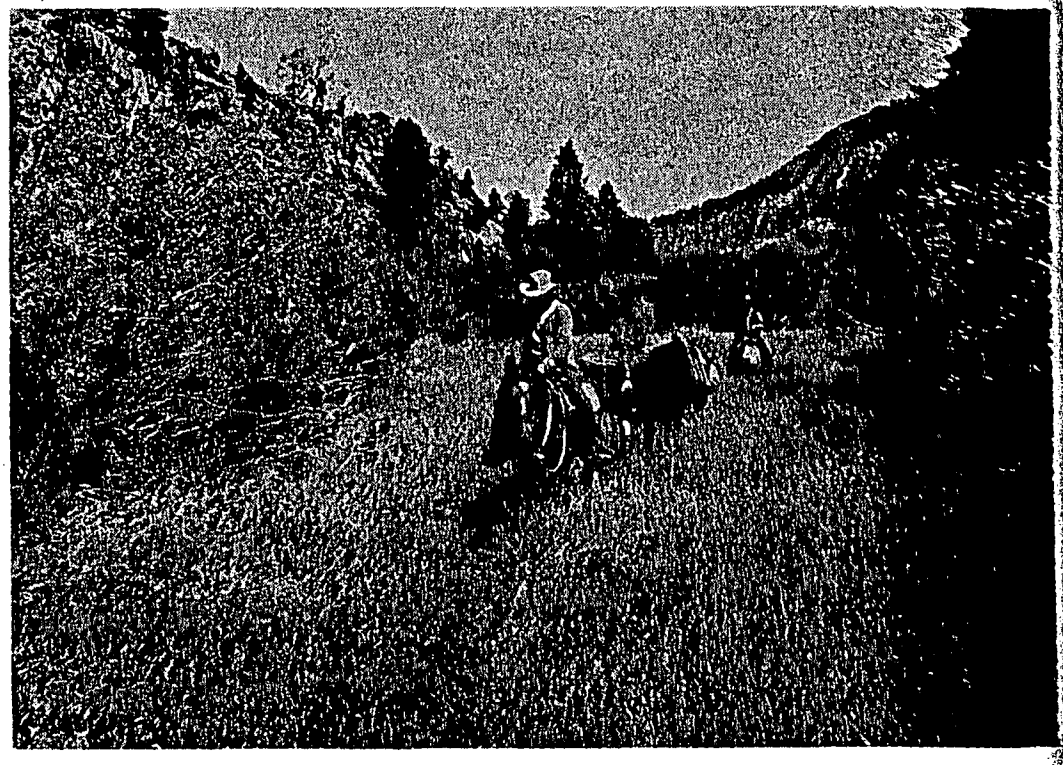

Fig. 24. A pack train taking beavers into the high country. Alpine County, 1943.

against light and cold. A water pan, 18″ x 36″ x 8″, holding approximately 30 gallons of water, is placed in the pen when it is in use.

Beavers held in the pens are supplied with the same foods that they were eating under natural conditions, and the diet is supplemented by a few cut carrots and apples which tend to prevent the often severe constipation caused by the lack of normal exercise. The water in the pan is changed at least twice daily. Under these conditions beavers can be held safely for several days.

Before beavers are placed in the holding pen they are weighed and the sex determined. The two sexes are marked for later identification with colored string or by clipping the fur at the base of the tail. It is considered that a well-balanced plant of beavers should consist of not less than two pairs. An attempt is made to liberate beavers of uniform size and they must, of course, be in first-class physical condition.

After beavers have been selected for planting, they are lifted from the holding pen with the net and transferred to shipping boxes for transportation to the planting site. However, where access to the planting site can not be gained by truck it is necessary to transfer the animals again, this time to individual carrying cages. The carrying cage is 12″ x 12″ x 18″ in size, made of sturdy wire mesh, fitted with a hinged door at one end, and equipped with a convenient handle. It is light and can either be carried like a suitcase, or when pack horses are used, can be placed in a pack bag or box (Fig. 24).

Upon arrival at the planting site and just prior to liberation, each beaver is tagged for future identification. The tag is a small metal disk which is attached to the right ear. Each tag bears a serial number and the legend "Notify Cal. D. F. and G." The actual planting operation is simple since the beavers are merely released from confinement at the selected site. They usually enter the water immediately and are quickly lost from sight.

Beavers establish themselves at the selected site, or at least close to it, frequently enough so that the investigator can justifiably feel that he has made a reasonably accurate estimate of their requirements. In numerous instances, however, the animals completely ignore the opinions of others and sometimes travel long distances to establish themselves at other sites that for some unknown reason are better suited to their requirements. It is essential that the history of each planting be studied carefully and that the data obtained from these records be applied so that the ratio of successful to unsuccessful colonies may be increased as the beaver transplanting work progresses.

Management Problems

The management of beavers in California involves the problem of development on the one hand and that of control on the other.

The object of the development program is to extend the range of California beavers in nonagricultural areas throughout the State, not only for the purpose of producing a valuable fur crop, but with the hope that full advantage may be taken of the water storage, erosion control, and aesthetic values that may be derived from the presence of properly located beaver colonies. Certain existing colonies have already clearly demonstrated these values, and land management agencies such as the

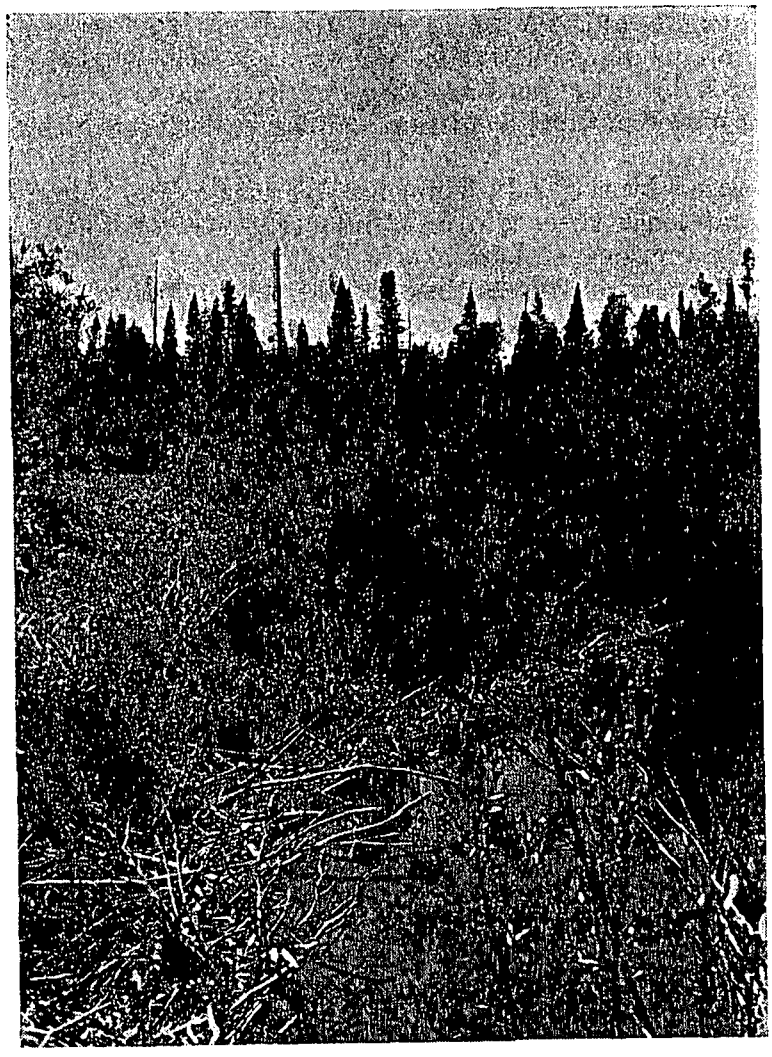

FIG. 25. End view of beaver dam showing portion of pond. This picture was taken at a time of year when the flow of the stream would normally be reduced to a mere trickle. Plumas County, August, 1944.

U. S. Forest Service and U. S. Soil Conservation Service are actively interested in the transplanting program—to the point at which we are as yet unable to furnish enough breeding stock to supply present demands.

There are other colonies, however, that due to habitat deficiencies may seriously deplete their food supplies if they are not brought under control. Beaver, unlike many other kinds of wild animals, are easily controlled and colonies that get out of hand may either be removed or reduced to the population level at which they are in balance with their environment. Thus far, all beavers that have been removed from colonies that contain surplus animals have been used for transplanting and this situation will persist for some time to come. In the meantime, a plan must be worked out for a carefully controlled harvest of beaver in non-agricultural areas.

In agricultural areas, particularly in the delta region of the Great Valley, a different situation exists. The entire problem there is one

FIG. 26. Beaver pond with house in foreground. Plumas County, August, 1944.

control. There is no question that the golden beavers in the delta are a definite menace to levees and other reclamation works and their numbers must be limited. At the present time, the control of beavers in the delta is being handled entirely by the owners or lessors of reclaimed agricultural lands, who, under permit from the Division of Fish and Game, employ trappers and market beaver skins with little or no supervision. This haphazard system has resulted in a spotted pattern of control. There is a need for the development of a management plan under which delta beavers may be controlled on an area-wide basis that will give a sustained yield.

The Sonora beaver which inhabits the Colorado River presents still another problem. Along the river the presence of beaver is desirable and the States of Arizona and California are presently developing a joint management plan designed to maintain the maximum beaver population consistent with the available food supply. However, in irrigated areas adjacent to the river, such as the Palo Verde Irrigation District in California and the Gila Irrigation District in Arizona, beavers are definitely undesirable and must be trapped intensively in order to prevent damage to irrigation works.

In 1940 (Tappe, 1942, pp. 23-27) a survey was made of the Colorado River by California and the numbers of beaver present were estimated. Joint surveys of the river from the Nevada line to the Mexican border were made by California and Arizona in 1943, 1944, and 1945, and a number of beavers were taken from the river and adjacent areas under the supervision of the Arizona Game and Fish Department. The problem of beaver management on the Colorado River between California and Arizona will be discussed in a later paper.

Conclusion

In concluding this discussion of beaver management in California, the writer wishes to emphasize the necessity for proceeding with caution in the much needed development of a State-wide plan of management. It is felt that a sound plan, carefully followed out, can not help but prove beneficial to the land manager, the sportsman, the licensed trapper, and all lovers of the out-of-doors.

TABLE 1

Beaver Plantings in California

Date of plant	Kind	Male	Female	Sex unknown	Total	County trapped	County planted
Sept. 3, 1923	Sonora[1]			23	23	Riverside	Plumas
Aug. 27, 1934	Idaho[2]	2	2		4	Blaine County, Idaho	Plumas
Sept. 15, 1934	Idaho[2]	2	2		4	Blaine County, Idaho	Tuolumne
Sept. 22, 1936	Shasta[2]	1	3		4	Modoc	Siskiyou
Sept. 5, 1936	Shasta[2]	2		4	6	Modoc	Modoc
Sept. 11, 1936	Shasta[2]			4	4	Modoc	Modoc
Oct. 17, 1936	Shasta[2]		1	4	5	Modoc	Modoc
Aug. 27, 1938	Oregon[2]			4	4	Crooked River, Oregon	Tuolumne
Aug. 27, 1938	Oregon[2]			4	4	Rogue River, Oregon	El Dorado
Aug. 29, 1938	Golden[3]			7	7	San Joaquin	Stanislaus
Sept. 15, 1938	Golden[3]			29	29	San Joaquin	Napa
Oct. 29, 1939	Oregon[6]			5	5	Wheeler County, Oregon	Humboldt
April, 1940	Golden[3]	2	1		3	Merced	Tuolumne
Aug. 30, 1940	Shasta[3]			3	3	Modoc	Siskiyou
Aug., 1940	Golden[3]			6	6	Merced	Lake
Aug., 1940	Shasta[3]			2	2	Modoc	Modoc
Sept., 1940	Golden[4]	2	1		3	Merced	Contra Costa
Dec., 1940	Golden[4]	3	1	2	6	Merced	Contra Costa
Aug., 1941	Golden[4]			5	5	Merced	Plumas
Aug., 1941	Shasta[4]	1	1	3	5	Modoc	Mono
Aug., 1941	Shasta[3]			2	2	Modoc	Siskiyou
Oct., 1941	Golden[4]	1	1	3	5	Yuba	Mendocino
Jan., 1942	Golden[4]			6	6	Merced	Ventura
Feb., 1942	Golden[4]			5	5	Yuba	Monterey
April, 1942	Shasta[4]	1			1	Siskiyou	Siskiyou
July, 1942	Golden[4]	2	2		4	Merced	San Mateo
July, 1942	Shasta[4]	2			2	Modoc	Alpine
Aug., 1942	Golden[4]	1	1		2	Merced	San Mateo
Aug., 1942	Golden[4]	2	1		3	Yuba	Butte
Sept., 1942	Idaho[4]	2	2		4	Plumas	Alpine
Sept., 1942	Golden[4]		3		3	Merced	Mariposa
Nov., 1942	Golden[4]	1	3		4	Stanislaus	Butte
Feb., 1943	Golden[4]	1			1	Merced	Merced
April, 1943	Golden[4]	2	1	1	4	Stanilsaus	Mariposa
May, 1943	Golden[4]	2	1		3	Yuba	Butte
June, 1943	Golden[4]	3	1	1	5	Merced	Mariposa
July, 1943	Idaho[4]	3	2		5	Plumas	Sierra
July, 1943	Idaho[4]	1	1		2	Plumas	Plumas
Aug., 1943	Golden[4]	1	2	1	4	Merced	Mariposa
Nov., 1943	Shasta[4]	1			1	Modoc	Modoc
Nov., 1943	Golden[4]	1	3		4	Merced	Mariposa
April, 1944	Golden[4]	2	2		4	Merced	San Diego
April, 1944	Golden[4]	1	1		2	Merced	Mariposa
May, 1944	Golden[4]	1	1	1	3	Merced	Mariposa
May, 1944	Golden[4]	1	1	2	4	Merced	Mariposa
May, 1944	Golden[4]	1	1	1	3	Merced	Mariposa
Aug., 1944	Golden[4]	1	1	1	3	Monterey	Tuolumne
Oct., 1944	Golden[4]	3	2		5	Stanislaus	Mariposa
Oct., 1944	Golden[4]	2	3		5	Stanislaus	Mariposa
Oct., 1944	Golden[4]	1	2		3	Stanislaus	Mariposa
May 17, 1945	Golden[5]	3	2	1	6	Stanislaus	Fresno
May 28, 1945	Golden[5]	1	1	1	3	Stanislaus and Merced	Sacramento
June 5, 1945	Golden[5]	3	3	1	7	Stanislaus and Merced	Fresno
June 14, 1945	Golden[5]	2	1	3	6	Stanislaus and Merced	Tuolumne
June 19, 1945	Golden[5]	2	3		5	Stanislaus and Merced	Riverside
July 6, 1945	Golden[5]	1	1	2	4	Monterey	Santa Barbara
July 9, 1945	Golden[5]	1	1		2	Monterey	Monterey
July 24, 1945	Idaho[5]	1	1		2	Plumas	Lassen
July 26, 1945	Idaho[5]	1	1	1	3	Plumas	Sierra
July 26, 1945	Idaho[5]	2	2	1	5	Plumas	Sierra
July 29, 1945	Idaho[5]	2	2		4	Plumas	Nevada
Aug. 3, 1945	Idaho[5]	1	1		2	Plumas	Sierra

Beav

Date of plant	Kind	Male	Fe
Aug. 8, 1945	Idaho[5]	3	
Aug. 14, 1945	Idaho[5]	3	
Aug. 15, 1945	Idaho[5]	2	
Aug. 30, 1945	Idaho[5]	1	
Sept. 14, 1945	Shasta[5]		
Sept. 14, 1945	Shasta[5]	2	
Sept. 21, 1945	Shasta[5]	1	
Sept. 25, 1945	Shasta[5]	1	
Oct. 6, 1945	Shasta[5]	3	
Oct. 6, 1945	Shasta[5]	1	
Oct. 8, 1945	Shasta[5]	1	
Oct. 22, 1945	Golden[5]	2	
Oct. 22, 1945	Golden[5]	2	
Oct. 28, 1945	Golden[5]	3	
Nov. 10, 1945	Golden[5]	2	
Totals		102	

[1] Accidental escape from commercial fur f
[2] Planted by U. S. Forest Service.
[3] Nuisance beaver transplanted by Divisi
[4] Experimental plants made by Project 5-
[5] Planted by Project 18-D.
[6] Donated to California Division of Fish a

TABLE 1—Continued

Beaver Plantings in California

Date of plant	Kind	Male	Female	Sex unknown	Total	County trapped	County planted
Aug. 8, 1945	Idaho[6]	3	1		4	Plumas	Placer
Aug. 14, 1945	Idaho[6]	3	2		5	Plumas	Sierra
Aug. 15, 1945	Idaho[6]	2	2		4	Plumas	Nevada
Aug. 30, 1945	Idaho[6]	1	1		2	Plumas	Plumas
Sept. 14, 1945	Shasta[5]		1	1	2	Modoc	Siskiyou
Sept. 14, 1945	Shasta[6]	2	2		4	Modoc	Siskiyou
Sept. 21, 1945	Shasta[5]	1	1	2	4	Modoc	Shasta
Sept. 25, 1945	Shasta[5]	1	2		3	Modoc	Lassen
Oct. 6, 1945	Shasta[6]	3	1		4	Modoc	Shasta
Oct. 6, 1945	Shasta[5]	1	2		3	Modoc	Lassen
Oct. 8, 1945	Shasta[5]	1	2		3	Modoc	Lassen
Oct. 22, 1945	Golden[5]	2	2		4	Merced	San Diego
Oct. 22, 1945	Golden[5]	2	2		4	Merced	San Diego
Oct. 28, 1945	Golden[6]	3	1		4	Merced	Tuolumne
Nov. 10, 1945	Golden[5]	2	3		5	Stanislaus	Riverside
Totals		102	94	142	338		

[1] Accidental escape from commercial fur farm.
[2] Planted by U. S. Forest Service.
[3] Nuisance beaver transplanted by Division of Fish and Game.
[4] Experimental plants made by Project 5-R.
[5] Planted by Project 18-D.
[6] Donated to California Division of Fish and Game from Oregon Exhibit, Golden Gate International Exposition.