

FRIDAY, SEPTEMBER 1, 1978

PART IX



**ENDANGERED
SPECIES SCIENTIFIC
AUTHORITY**

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**EXPORT OF APPENDIX II
SPECIES**

**Bobcat, Lynx, River Otter, and
American Ginseng; Export
Findings for the 1978-1979
Season**

[4310-55]

Title 50—Wildlife and Fisheries

CHAPTER VIII—ENDANGERED
SPECIES SCIENTIFIC AUTHORITYPART 810—EXPORT OF APPENDIX II
SPECIESBOBCAT, LYNX, RIVER OTTER, AND
AMERICAN GINSENGExport Findings for the 1978-1979
Season

AGENCY: Endangered Species Scientific Authority.

ACTION: Final rulemaking.

SUMMARY: On July 7 and August 7, 1978, the Endangered Species Scientific Authority (ESSA) proposed findings on a State-by-State basis as to whether export of bobcat, lynx, and river otter pelts harvested in 1978-1979 and American ginseng roots harvested in 1978 will not be detrimental to the survival of the species (43 FR 29469 et seq.; 43 FR 35013 et seq.). The ESSA has received substantial comment on these proposals, primarily in the form of State reports in support of a no detriment finding. The ESSA hereby establishes final export findings for these seasons. Federal export permits may be issued only for pelts and roots of these species that were harvested in States for which the ESSA has found no detriment.

EFFECTIVE DATE: September 1, 1978.

ADDRESS: Comments should be addressed to the Executive Secretary, Endangered Species Scientific Authority, 18th and C Streets NW., Washington, D.C. 20240. Forthcoming comments and comments already received will be available for public inspection at 1612 K Street NW., Washington, D.C., 12th floor, 7:45 a.m. to 4:15 P.M., Mondays through Fridays except Federal holidays.

FOR FURTHER INFORMATION
CONCERNING BIOLOGICAL FINDINGS CONTACT:

Dr. William Y. Brown, Executive Secretary, Endangered Species Scientific Authority, 18th and C Streets NW., Washington, D.C. 20240, 202-343-8962.

FOR INFORMATION CONCERNING
EXPORT PERMITS CONTACT:

Federal Wildlife Permit Office, U.S. Fish and Wildlife Service, Washington, D.C. 20240, 202-634-1496.

SUPPLEMENTARY INFORMATION: The Endangered Species Scientific Authority (ESSA) hereby establishes

findings on a State-by-State basis as to whether export of bobcat, lynx, and river otter pelts harvested in 1978-1979 seasons, and American ginseng roots harvested in 1978, will not be detrimental to the survival of these species. These findings are meant to satisfy the ESSA's responsibilities under article IV, paragraph 2 of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (Convention). Federal export permits may be issued only for pelts and roots of these species that were harvested in States for which the ESSA has found no detriment.

The Federal Wildlife Permit Office of the U.S. Fish and Wildlife Service serves as the U.S. Management Authority (MA) for the Convention. Before the MA can issue permits for foreign export of appendix II species taken from the wild, the MA must be satisfied that specimens were not taken in violation of State law and in addition the ESSA must advise the MA that the export will not be detrimental to the survival of the species (Convention, article IV 2). The present document frequently refers to ESSA "approval" of export; the term indicates that the ESSA finds export will not be detrimental to survival and therefore has no objection to issuance of export permits by the MA, but the term in no way suggests limitation of the authority of the MA to withhold permits on other grounds. Note also that Convention permits are not required for trapping or sale within the United States.

Actions of the ESSA up to July 7, 1978, are described in the FEDERAL REGISTER issue of that date (43 FR 29469 et seq.), as background information to proposed ESSA findings whether export of bobcat, lynx, and river otter pelts harvested in 1978-1979 and American ginseng roots collected in 1978 will not be detrimental to the survival of these species. The July 7 ESSA proposal would establish several standards for ESSA findings of no detriment (43 FR 29477-8), and would adopt guidelines for findings published on April 10, 1978 (43 FR 15097).

The ESSA proposed to approve export without Federal quotas for 1978-1979 harvest of those State populations of bobcat, lynx, and river otters meeting the following minimum requirements recommended by the New Orleans Working Group, as discussed and construed in the ESSA's notice of April 10:

MINIMUM REQUIREMENTS FOR BIOLOGICAL
INFORMATION

1. Population trend information . . . the method of determination to be a matter of State choice.
2. Information on total harvest of the species.

3. Information on distribution of harvest.
4. Habitat evaluation.

MINIMUM REQUIREMENTS FOR A MANAGEMENT
PROGRAM

1. There should be a controlled harvest . . . methods and seasons to be a matter of State choice.
2. All pelts should be registered and marked.
3. Harvest level objectives should be determined annually.

Some State wildlife agencies meet these recommendations except for the failure to specify a harvest level objective. Provided that an approximate harvest can be predicted based upon past reported harvest and past and planned harvest controls, the ESSA did not propose to require an explicit harvest level objective for export approval in 1978-79.

The ESSA also proposed to approve export without Federal quotas from certain State populations of bobcat, lynx, and river otter for which one or more recommendations of the working group have not been met adequately, if at all. We made these proposals only because we considered other information sufficient for a finding of no detriment. For example, information on high density from certain Southern States, although not rigorous, suggests that less thorough management than in other States may provide as much assurance that export will not be detrimental. However, we look forward to adoption of these recommended minimum requirements by every affected State.

The ESSA proposed to approve export subject to Federal quotas for States whose wildlife agencies lack authority to limit bobcat harvest, provided those agencies have implemented substantial programs to evaluate the impact of harvest and can by these or other means demonstrate that export subject to a quota in 1978-79 will not be detrimental to the survival of this species in their State. The ESSA commented that this situation cannot be continued indefinitely. The New Orleans Working Group has recommended:

No pelt from any of the three species should be allowed into international export if it was taken in a State in which the wildlife management agency does not have the authority to regulate the taking of the species.

However, the ESSA indicated that it does not believe that an inflexible position on this issue is appropriate. Failure of the ESSA to approve any export from these States might cripple fledgling research programs, because the incentive to obtain tags for export serves as a device for the State agencies to obtain carcasses and to evaluate harvest. Furthermore, at least one such State has produced substantial

biological information indicating a viable bobcat population.

Only wildlife agencies in New Mexico and Wyoming still lack authority to limit harvest of bobcat. Neither apparently will have the opportunity to obtain full legislative authority over the species before our 1978-79 export findings are made. However, both apparently will have such an opportunity before the 1979-80 season. Although we proposed to approve limited export in 1978-79 for States in this category, we are concerned about the status of the bobcat in these States, and our approval of limited export in 1978-79 should not be construed as a precedent for approval in the future.

On July 7, the ESSA also proposed to approve export of American ginseng from those States that have implemented substantial programs to conserve the species, and whose populations apparently are capable of supporting a sustained commercial yield. Acceptable conservation programs generally must include some form of research and regulation. However, the ESSA recognizes the recency of wild plant management in many States and the frequent lack of management authority in State agencies. Consequently, we proposed to approve export from certain States whose management agencies lack authority to limit harvest, because those States have substantial plans for 1978 under existing authority and are currently supporting sustained commercial yield of the plant. Several of those State agencies have indicated that they anticipate seeking additional authority from future State legislatures. The ESSA wishes to be supportive of new State programs; however, as with the furbearers, our approval of export for roots harvested in these States during 1978 should not be construed as a precedent for approval in the future.

Early in the 30-day comment period on the July 7 proposal, the ESSA received several State reports in support of a no detriment finding. Because we desire maximum public input, on August 7 (43 FR 35013) we revised our July 7 proposal in light of these reports, and we extended the comment period until August 23 for both the original proposals and these revisions.

SUMMARY OF GENERAL COMMENTS

Subsequent to the ESSA's proposed findings of July 7, 1978, comments on exports of these species have been received from nongovernmental associations and individuals as well as from government agencies of many affected States. Comments of State agencies are incorporated in the supplemental tables below, provided that the comments were not considered in our July 7 or August 7 proposals and that the

new information substantially revises that given previously.

As previously, the ESSA has received many letters protesting export of bobcat, lynx, and river otter. However, none of these letters refer specifically to our July 7 or August 7 proposals, and these letters do not provide substantial information on these species. The ESSA also has received a few comments from trappers and hunters opposed to any Federal regulation of export, but these have not referred to our July or August proposals either.

The ESSA has received comments from the American Fur Merchant's Association, the American Fur Industry, and the Associated Fur Manufacturers. Although the comments express dissatisfaction with placement of the bobcat, lynx, and river otter on appendix II, the comments are generally supportive of the ESSA's proposals.

The ESSA has received comments from two private conservation organizations which are principally concerned with the status of these species in two States. One organization, Fur and Trapping Ethics (FATE), submitted detailed comments addressing ESSA export findings in general and these findings with respect to Minnesota in particular. FATE urged the ESSA to require at least what the New Orleans Working Group on Bobcat, Lynx, and River Otter has recommended and to require better data than have been presented. For Minnesota, FATE recommended that the ESSA approve no export of bobcat and lynx and approve export of no more than 300 river otter. FATE bases its recommendation on the uncertainty of the status of the populations, coupled with high pelt price and a decline in reported Minnesota bobcat harvest from 1975 through 1977.

The ESSA appreciates FATE's recommendation that better data be required. We agree that little quantitative information is available on the status of these species in Minnesota, or elsewhere. Furthermore, we share FATE's concern over the way in which high pelt price may affect harvest, and populations in turn. However, we consider information on these species in Minnesota to indicate that harvest in 1978-79 will not be detrimental to their survival. This information is summarized in ESSA's export proposals of July 7, 1978 (43 FR 29469), and is available for public inspection upon request.

The Sportsmen's Council of Washington State commented in detail upon the bobcat in Washington. The Council asked the ESSA not to approve bobcat export until the working group's recommended minimum requirements are met. The Council expressed particular concern for the tag-

ging system implemented by the State in 1977-78, which it claims was inadequate.

The ESSA recognizes that certain tagging programs may not effectively report harvest or insure that pelts were taken in the State of tagging. We recognize that State tagging programs vary widely, from mandatory tagging of pelts by State agents at the field level to sale of tags to dealers without further control. However, we expect that Washington State will strengthen its tagging program in 1978-79. In any event, we have stipulated in these findings that pelts must be identified to State and season, and the MA is responsible for working with Washington and other States to insure that these conditions are met.

A detailed comment on the July 7 proposal was submitted by the Defenders of Wildlife, incorporating additional comments submitted by the Sierra Club and Ms. Hope Ryden.

Among other points, these comments deny the accuracy of total population sizes estimated by various State wildlife agencies and summarized in the ESSA's notice of March 16 (43 FR 11081). These claims are supported by a document prepared for the Sierra Club by Dr. Irven H. Rinard. The document assumes, based on several cited studies, that bobcat density varies from 1.5 square miles per bobcat to 10 square miles per bobcat. From this assumption and the assumption that density decreases as latitude and longitude increase, densities are predicted for each of nine regions of the United States. These predicted densities vary from 1.5 square miles per bobcat to 5 square miles per bobcat. The total area of each State is divided by the density for the appropriate region, resulting in a "maximum" estimate of population size.

We recognize that little confidence generally can be placed in the population estimates that have been made for the bobcat in several States, and these estimates did not weigh heavily in our proposed findings. On the other hand, the Sierra Club analysis has certain limitations. Bobcat density may vary with latitude and longitude, but we have no reliable information to this effect, except that bobcats apparently are most dense in the Southeast. Furthermore, there are reported densities considerably higher than the cited 0.67 bobcats per square mile (1.5 square miles per bobcat). For example, one recent study in Alabama indicated densities of two bobcats per square mile (letter from S. D. Miller to Cecil D. Andrus, September 15, 1977), and 1.5 bobcats per square mile were found in South Carolina (Provost, Nelson, and Marshall, 1973. *Population Dynamics and Behavior in the Bobcat*. In *The World's Cats*, ed. R. L. Eaton, pp.

42-67. Winston, OR: World Wildlife Safari). We do not know how representative these density estimates are, but they are based on thorough local investigations. In any event, they indicate densities considerably higher than used in Dr. Rinard's analysis.

The Sierra Club comment also may be misleading because it does not account for habitat that has been rendered unsuitable for bobcat. Dr. Rinard acknowledges this difficulty, and accordingly characterizes his predictions as "maximum" estimates. However, this is a crucial but unknown variable. In general, there is no reliable way to estimate State population size without field research within the States.

Most of the comment from the Defenders of Wildlife is a restatement and recharacterization of information selected from material previously summarized or discussed by the ESSA, followed by conclusions different from those we have drawn. We invite interested persons to review the published record of our actions affecting bobcats, as well as supporting documentation in our files, and to compare this record with the comment from Defenders of Wildlife, which is available for inspection at our office.

The Defenders' comment introduces a substantial and new element by requesting bobcat export determinations by subspecies. Their request apparently is based on Article I of the Convention, which defines a species as "... any species, subspecies, or geographically separate population thereof; ...". The bobcat was included in Appendix II by the listing of the entire family Felidae. Just as this family listing requires consideration of the infra-specific groups included in the Convention definition. Such consideration, however, should not mandate the publication of findings on a subspecific basis, so long as the effect of findings made is to prevent detriment to recognized taxa.

The ESSA recognizes the mandate to protect subspecies. We have made export findings for all 48 States in which bobcats have historically occurred. Only nine subspecies of bobcats are presently named as occurring in the United States. Information is available and management is carried out in State units. The State-by-State findings provide a more precise and responsive mechanism than would findings based primarily on subspecies. In addition, bobcat subspecies are poorly defined, adding weight to this conclusion.

Appendix VIII to the Defenders' comment, a letter from David Nagorsen of the Royal Ontario Museum to Ms. Ginger Merchant of Defenders, states succinctly some underlying dif-

ficulties with making bobcat export findings by subspecies:

"... Peterson's 1952 revision is still the best taxonomic treatment of the eastern races of bobcat. Hall and Kelson's map seems to be more or less the same as Peterson's, however, they drew sharp boundaries [sic] between subspecies. This is rather unrealistic. Unless there are geographic barriers isolating two races (e.g., mountains), there is usually a zone of intergradation between two races or subspecies. Peterson concluded that a zone of intergradation between the bobcat races *gigas* and *rufus* occurs in Maine whereas Hall and Kelson drew a sharply defined boundary separating these two races in Vermont, New Hampshire, and New York States.

The question of subspecies or races in mammals and other vertebrates for that matter, is a controversial one. Some biologists reject entirely the concept of distinct subspecies or races. Even if one accepts the concept, mammalian subspecies are frequently distinguished by subtle differences in size or cranial characters. Without a knowledge of the collecting site, it may be extremely difficult to assign a specimen to a given subspecies. For endangered species lists, I personally would prefer to see only the species name and the regions or local areas where it is considered endangered. For example the bobcat *Lynx rufus* is endangered in Maine (or whatever) rather than the bobcat subspecies *L. r. gigas* is endangered. ..."

The crisp subspecies lines used by Hall and Kelson (*North American Mammals*, 1958) and in Hall's more recent unpublished subspecies map (1978, supplied with Defenders' petition), coupled with the abbreviated subspecies descriptions quoted by Defenders from Seton (*Lives of Game Animals*, 1929), make the definition of bobcat subspecies appear more simple and clear-cut than is justified by the original literature on which these descriptions hinge. As described in the letter quoted above, Hall's lines merely suggest boundaries between historically described subspecies. For example, Peterson and Downing (1952, *Contrib. Roy. Ont. Mus.* 33: 1-22), who most recently reviewed eastern bobcat subspecies, described a broad zone of overlap between *Lynx rufus gigas* and *L. r. rufus*. They found these two subspecies overlapping in New York, Vermont, New Hampshire, Maine, and Nova Scotia. Hall, on the other hand, represents this zone of overlap with a single boundary line. The latter approach is useful in a work summarizing taxonomy of all North American mammals, but cannot reflect the complexities of a dynamic system, especially when based on a small number of specimens.

Modern concepts of subspecies generally are based on a range of characters rather than on a single "type" as suggested by the cited descriptions from Seton. Peterson and Downing (*op cit.*), following the most complete recent examination of eastern subspe-

cies, concluded that "In pelage colour and markings we find such an extreme range of variation in the skins available for study that we can find no constant pelage character by which any of the eastern races can be distinguished with certainty." For their study they relied on statistical analysis of skull measurements and size ratios. As frequently occurs in such cases, many of the measurements overlap among subspecies and are distinguishable only when statistical parameters of large samples are compared. A subspecies might be defined by the high frequency of a particular character, but that character may occur in other populations and may not be useful in assigning an individual specimen to the subspecies.

State agencies can respond to different conservation needs when subspecies within a State can be readily distinguished. For example, in the Northwest, the dark coastal *L. r. fasciatus* can be distinguished from the lighter inland *L. r. pallescens*. Eastern Oregon has been closed to bobcat trapping, and eastern Washington has shorter seasons. Washington is also collecting data separately from east and west of the Cascades Range, which separates the subspecies. Such clear-cut cases, however, are exceptional, and both the biology and management of bobcats require the ESSA to make its findings State-by-State rather than by subspecific boundaries. This approach should ensure survival of both the species and the various subspecies.

In addition to comments by State agencies that are incorporated in the supplemental tables below, the ESSA has received seven comments concerning the July 7 proposal for American ginseng. Three comments simply state support for the proposal to approve exports from North Carolina and Missouri.

Three comments supply information and make suggestions similar to those discussed previously. In addition, these comments express support for proposals to approve exports from Kentucky, Pennsylvania, and Illinois.

Finally, in a letter dated July 26, 1978, Mr. A. T. Thomas, Appalachian Root and Herb Co., stated that he believes American ginseng is becoming rare in West Virginia. Mr. Thomas cited land uses and harvest methods that contribute to the plant's decline. Mr. Thomas' observations give cause for concern, and need to be thoroughly investigated. However, West Virginia is a large producer of wild American ginseng roots, and the plant is known to occur in 51 of 55 counties. In addition, West Virginia has initiated a program to better establish the species' status and to monitor and manage its harvest. In the future, if available information does not support continued

harvest, the ESSA will not find in favor of export.

SUPPLEMENTAL TABLES

For each of the States and species in the supplemental tables below, the ESSA has received additional information in support of a no detriment finding. Consequently, we are publishing summaries of this information in the same form as used in our proposals of July 7 (43 FR 29469) and August 7 (43 FR 35013).

TABLES: BOBCAT AND OTTERS

Description of the table categories follows, along with explanations of abbreviations used.

State classification. The type of management provided by a State wildlife agency is often defined by an official category to which each species is assigned. Because State definitions of the same word may differ, the labels here may not correspond exactly to that found in a State's regulations, but the intent has been retained.

F=Furbearer: Taking is allowed under State control and pelts may be sold.

G=Game: Hunting is allowed under State control. In some, but not all States, this may include trapping and sale of pelts.

R=Regulated: The State wildlife agency has authority to regulate taking. This may include furbearer and game as well as other classifications.

U=Unregulated: Authority to manage the species has not been granted to the State wildlife agency by its legislature.

Quota given, 1977-78. State export quotas listed here represent the maximum number of pelts of that species for which export was approved by the ESSA in the 1977-78 season, as reported in the March 16 FEDERAL REGISTER notice.

Reported harvest, 1977-78. The

State's reported harvest for the 1977-78 trapping season. In certain cases (see abbreviations below), more than one reporting system was used, and the differing reports are given with appropriate designations. Problems of comparing harvest reports made by different systems are discussed in the March 16 notice.

TR=Trapper Report: Mandatory report by trapper of each kill. In most cases this includes tagging of the pelt by a State official. This is generally considered the most reliable measure of harvest.

HR=Hunter Report: Mandatory report by hunter (as for trapper).

DR=Dealer Report: Mandatory report by fur dealers in State of all furs bought and sold. Such reports may be misleading when no distinction is made for skins originating in one State and sold in another. Multiple sales of the same pelt can also reduce accuracy of this method.

TS=Trapper Survey; HS=Hunter Survey; DS=Dealer Survey: voluntary survey or reports from a sample of trappers, hunters, or fur dealers. Results of these are commonly extrapolated, with a wide range of reliability, depending on attention to statistical limitations.

ADC=Animal Damage Control: Report of predator control operations.

ET=Export Tag: Prior to setting of export quotas for 1977-78, most States committed themselves to issuing a limited number of tags, numbered and identified by State of origin. For a number of reasons, many States either were unable to limit the number of regularly issued tags or were unable to require mandatory tagging for that season. To solve this problem, many issued a limited number of special tags. Reports from several parts of the country indicate that prices offered for pelts bearing valid export tags were markedly higher than for untagged pelts, suggesting a reasonably strong incentive for tagging of pelts even where voluntary.

(##%)=Estimate of completeness of report: A number of States were still in the process of collecting data, and were unable to provide final figures in time for the present proposal. Where a percentage is given, it indicates the State's estimate of the completeness of their report (i.e., percent of trappers or dealers reporting, etc.).

ADJ=Adjusted. Indicates State agency has estimated total from partial records.

Recent changes in management. Important considerations in the ESSA's decision not to apply quotas to all States for 1978-79 are the recent changes in many States' management of these species, especially for the bobcat, in areas where problems may have occurred. Most of these changes are seen as ensuring a more conservative harvest or providing better information for management. The list provided here is sure to be incomplete, but provides a summary of many changes described to the ESSA.

Findings and conditions for 1978-79 season. The ESSA's findings concerning export of pelts from the coming trapping season are given here. The rationale for approving export from certain States without use of quotas, as were used in 1977-78, has been explained above. The findings are abbreviated as:

A=Approved: Export is approved for pelts legally taken during 1978-79 season. The ESSA considers that expected harvest under the State's planned management regime will not be detrimental to the survival of the species in that State. Pelts must be clearly identified as to State of origin and season of taking.

Q:####=Quota: Exports from this State are approved for pelts taken during the 1978-79 season, on the condition that exports are limited to the specified quota, and pelts are clearly identified to State and season.

Comments. Other information relevant to the finding is given here.

RULES AND REGULATIONS

BOBCAT

State	Classification	Past Quota '77-78	Reported Harvest '77-'78		Recent Changes In Management	Findings & Conditions for '78-79 Season	Comments
			Number	How Reported			
Alabama	R	4,000	564 441 3,100	ET TR (18.4%) TR(ADJ)	5/77-Trapper report required.	A	Research in progress. Night hunting and electronic calls prohibited. Much land privately held, may reduce trapping pressure.
Arkansas	F	3,000*	1,838	DR	7/78-Changed from Game to Furbearer status, license required to take or buy, season reduced. '78-'79-May require tags.	A	Some carcass collection and study. Reduced harvest may be due to lower prices, unreported pelts, and bad weather.
Colorado	R	4,000	1,295 2,836	ET TS, DR	'75-First restrictive season. 12/77-Management goals changed to emphasize value of resource and de-emphasize predator control. '78-State to require tag and report.	A	Report prey increase since '75. Habitat survey made relative to trapping success.
Louisiana	F	4,000	3,718 3,349	DR ET	'78-State to tag for export.	A	Recently completed research; research planned and in progress. Scent post survey planned. Report decreased pelt value.
Massachusetts	G	50	19	TR	'71-Limited season, not open during deer season; report required. '75-Leghold trap illegal on land. '77-Mandatory tagging, eastern Mass. closed.	A	Carrying out detailed survey of bobcat habitat. Starting age structure analysis.
Mississippi	F	4,000	3,550	HS,TS(25%,ADJ)	'78-First restrictive trapping season, dealer license & report required. Tags to be required for "export" from State. Proposal to require tagging at trapper level.	A	Population considered increasing. Research proposed.
South Carolina	F	0	0		'78-Changed to Furbearer from Game status, tagging and report required from trapper and dealer. Furbearer management program being developed.	A	Not legal to sell pelts in '77-'78 season resulting in no harvest record. Survey of State biologists suggests populations secure and stable.
Texas	R	10,000	16,192- 24,462	TS(4.3%,ADJ), ADC	77-Annual general trapper survey initiated. 78-State agency implementing management program based on authority of Nongame Species section of Parks & Wildlife Code and of Executive Order by governor. Tags, reports, and submission of head required for export from State.	A	Investigating techniques for status surveys. Trapping license required for sale of pelts. Harvest per trapper same as previous year.

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BOBCAT

State	Classification	Past Quota '77-78	Reported Harvest '77-'78		Recent Changes In Management	Findings & Conditions for '78-79 Season	Comments
			Number	How Reported			
Vermont	R	200	92	TR	'71-Bounty eliminated. '76-First restrictive season. '77-'78-Tagging and carcass collection mandatory. '78-Hunting and trapping seasons reduced substantially.	A	Habitat considered extensive. State biologists consider population condition as fair or fair to poor, but suggest slight improvement over past year. Age structure study incomplete, but may suggest good reproduction and survival. Shortened seasons expected to reduce harvest.
Virginia	R	1,500	194 NC	ET DR	'78-Mandatory tagging by agency personnel.	A	Population study started. Harvest probably higher than indicated by export tags (Dealer reports being analyzed.).
Wyoming	U	2,000	1,466	ET	'77-'78- Voluntary tags available. '78-'79- To make more extensive efforts to collect research material.	Q: 2,000	Report increased prey. Studying teeth & reproductive tracts; age structure analysis suggests little change from previous years, except that young survival may be improving.
Alabama	F	1,500	826 631 1,300-1,800	ET TR(18.4%) TR(ADJ)	5/77-Trapper report required.	A	Research in progress. Harvest primarily in southern part of State. Habitat increasing in north. Low prices for beaver said to be reducing otter harvest.
Arkansas	F	400*	419	DR	'78-'79-May require tags.	A	Some carcass collection & study. May study status. Increased harvest attributed to increasing beaver and habitat, which may have led to increased trapping for beaver and otter, as well as to a favorable domestic market for otter.
Delaware	G	60	60 70	ET ET(ADJ)	Annual review of seasons. '78-State agency to tag pelts.	A	Wetland protection and management said to be improving otter habitat. Current population estimate, 600. Cooperating with Maryland otter research by supplying carcasses. Tagging resulted in better harvest estimate.
Louisiana	F	7,500	6,597 6,045	DR ET	'76-'77-State quotas set for certain management areas. Certain other areas closed. '78-To tag pelts for export.	A	Abundant sign reported following season. Studying census techniques. Report decreased trapping and pelt value for otter.

RULES AND REGULATIONS

OTTER

State	Classification	Past Quota '77-78	Reported Harvest '77-'78 Number	How Reported	Recent Changes In Management	Findings & Conditions for '78-79 Season	Comments
Maryland	R	165	187	TR	Pelt tags required since 1970.	A	Population model suggests increasing population. Substantial research in progress. Habitat survey relative to harvest.
Massachusetts	R	68	163	TR		A	Increased harvest due to higher catch per trapper. Mail survey done on otter abundance & distribution. Incomplete analysis of age structure suggests younger population.
Mississippi	F	350	2,260	TS(25%,ADJ)	'78- Dealer license & report required. Tags to be required for export from State. Proposal to require tagging at trapper level.	A	Population considered increasing with beaver. Research proposed.
New Hampshire	F	200	236 194	TR TR(Tags)	'73-Tagging and report required. '76-Authority to set seasons & limits transferred to agency from legislature. '78-Season reduced. Propose requiring carcass for tagging.	A	Harvest relatively constant. Carcasses to be collected for research. State biologist suggests is near carrying capacity.
South Carolina	G,F	650	560	ET	'78-Tagging & report required from trapper & dealer. Furbearer management program being developed.	A	Survey of State biologists suggests population secure & stable. Highest populations found with beaver.
Vermont	F	50	42	TR	'73-Mandatory report. '74-Tagging mandatory.	A	Difficult to trap because wide-ranging in State. Not considered rare or endangered.
Virginia	R	585	1,141	TR	'74-Tagging required. '78-'79-Closed west of Blue Ridge Mtns.	A	Research in progress. Teeth collected for aging. Monitoring studies started.
Washington	F	770	760 538	TR ET	Local closures adjusted regularly. '78-Tagging mandatory prior to "export" from State. '78-'79-Season for Olympic Peninsula extended 2 weeks.	A	Eastern Washington has been closed; population growing. Increasing population on Olympic Peninsula.
Wisconsin	F	1,200	1,053	TR		A	Tagging mandatory. 5-year research program starting. Current harvest within mean of past 5 years.

LYNX

Washington - '77-'78 quota, 35. None reported taken. '78-'79 season reduced 25%. Open only to limited trapping, much of habitat inaccessible. Finding: A.

TABLES: AMERICAN GINSENG

The following tables summarize by State the information concerning American ginseng received by the U.S. Fish and Wildlife Service and the ESSA. Many States have recently initiated programs to better establish the status of this species, to monitor its harvest, and, in some cases, to manage its harvest. Without such programs, it is doubtful that adequate information would be available to support approval of export by the ESSA.

Description of the table categories follows, along with explanations of abbreviations used. More detailed State-by-State summaries of comments are available from the ESSA.

State classification. Most States have trespass statutes pertaining to the protection of private and public plant resources. At minimum, these laws usually require oral permission from private landowners or written permission from State official before the resources may be removed. Although these statutes may be applied to help conserve American ginseng, they were not considered in determining the State classifications. The State classifications are based on State statutes, regulatory authorities, or initiatives specifically concerned with American ginseng.

C=Conserved: A State agency has implemented or has initiated programs to help conserve American ginseng even though the State agency has no express regulatory authority.

R=Regulated: A State agency has regulatory authority to conserve American ginseng.

U=Unregulated: No State agency currently has regulatory authority to conserve American ginseng.

Reported harvest. Few States have even gross estimates of the size of past harvest. The estimate for Virginia is based on voluntary dealer surveys (DS), which may include roots purchased from other dealers as well as those roots purchased from collectors.

State population. A sampling of qualitative opinions concerning American ginseng's abundance and status in the States is provided in the tables. Few of these opinions are supported by data.

As discussed in our August 30, 1977, FEDERAL REGISTER notice (42 FR 43729), qualitative opinions concerning the plant's abundance and status must be viewed critically. Such terms as endangered, rare, and stable are often used imprecisely, without guidelines or criteria. In addition, the plant's status undoubtedly varies with local conditions, further complicating any evaluation of its status and abundance.

In the tables, information concerning American ginseng's status and abundance is followed by a brief explanation of how those determinations were made. In some cases, no grounds for a qualitative opinion were given so no explanation is provided in the "How Determined" column. When available, grounds are stated with the following abbreviations:

B=Biologists' opinions: Either an

opinion expressed by a biologist to U.S. Fish and Wildlife Service or the ESSA, or an opinion expressed by one or more biologists which was cited as a basis for a State comment or a State endangered species list.

CC=Collectors' comments: Comments from collectors received by the U.S. Fish and Wildlife Service or the ESSA.

FO=Field observations: Included when field observations were specifically referred to as a basis for the determination.

HR=Herbarium records: Based on information recorded with herbarium specimens.

LS=Literature survey: Based on information in the literature.

SC=Survey of collectors: State survey of American ginseng collectors in the affected State.

SD=Survey of dealers: State survey of American ginseng dealers who purchased roots harvested in the affected State.

Findings and conditions for 1978 season. The ESSA's findings concerning export of roots from the 1978 collecting season are given here. The findings are abbreviated as:

A=Approved: Export is approved for roots legally harvested during the 1978 season. The ESSA considers that harvest in the State will not be detrimental to the survival of the species in that State. Roots must be documented as to State of origin and season of collecting.

Comments. Other information relevant to the finding is given here.

AMERICAN GINSENG

State	Classification	Harvest		State Population		Findings	Comments
		Reported Harvest/1977	How Reported	Estimates of Abundance or Status	How Determined		
Arkansas	C	--	--	Depleted but locally abundant 3/ Increased abundance and distribution 4/	-- SC (9 responses)	A	The State has initiated a program to better establish the species' status and to monitor the harvest pending express legislative authority in 1979.
Georgia	C	--	--	Endangered 9/	LS & B	A	Not included in the State endangered species list. The State has initiated a program to better establish the species' status and to monitor its harvest pending express regulatory authority.
Illinois	C	--	--	Rare 10/ Decreasing 11/ Threatened 12/ Stable, or Increasing, or Decreasing	-- SC & SD LS, HR & B CC	A	The State has initiated a program to better establish the species' status and to monitor its harvest pending express legislative authority in 1979.

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AMERICAN GINSENG

State	Classi- fication	Harvest		State Population	How Deter- mined	Findings	Comments
		Reported Harvest/ 1977	How Reported	Estimates of Abundance or Status			
Indiana	C	--	--	Decreasing <u>13/</u> Not Rare <u>14/</u> Stable or Decreasing	FO --	A	Not included in preliminary State list of endangered plants. <u>13/</u> The State has initiated a program to better establish the species' status, and to monitor the harvest pending express legislative authority in 1978-1979.
Iowa	C	--	--	Stable, or Increasing, or Decreasing	CC	A	The State has initiated a program to better establish the species' status and to monitor its harvest pending express legislative authority in 1979.
Minnesota	C	--	--	Rare and Endangered <u>17/</u> "Species of Special Interest" <u>27/</u> Stable	CC		The State has initiated a program to better establish the species' status and to monitor its harvest pending additional legislative authority in 1979.
New York	R	--	--	Decreasing and Protected <u>36/</u> Increasing or Decreasing	FO CC & DC	A	The State has initiated a program to better establish the species' status, and to monitor and manage its harvest pending additional legislative authority in 1979.
Pennsylvania	U	--	--	Stable <u>48/</u> Rare in Western Pennsylvania <u>49/</u> Rare in Perry County, Pennsylvania <u>50/</u> Rare in Southeastern Pennsylvania <u>51/</u> Not Endangered or Threatened <u>52/</u> Decreasing <u>53/</u> Decreasing in Northampton County, Pennsylvania <u>54/</u> Stable or Increasing	-- -- FO -- Because of harvest technique -- -- CC	A	Pennsylvania anticipates establishing a program to better establish the species' status, and to monitor and manage its harvest pending express legislative authority in 1978.
Tennessee	C	--	--	Rare <u>60/</u> Rare <u>17/</u> Threatened <u>61/</u> Decreasing <u>62/</u> Stable, or Increasing, or Decreasing Threatened <u>63/</u>	-- -- HR & B HR & FO CC B, and other individuals familiar with the plant.	A	The State has initiated a program to better establish the species' status and to monitor the harvest pending express legislative authority in 1979.

AMERICAN GINSENG

State	Classi- fication	Harvest		State Population Estimates of Abundance or Status	How Deter- mined	Findings	Comments
		Reported Harvest/ 1977	How Reported				
Virginia	C	20,663 lbs. 10 oz.	SD	"endangered in only a few localities if at all" 65/	B	A	The State has initiated a program to better establish the species' status and to monitor the harvest pending express legislative authority in 1979.
				Endangered 66/	--		
				Endangered 67/	--		
				Stable	CC		
Wisconsin	R	--	--	Threatened 70/	HR, LS & FO	A	The State has initiated a program to better establish the species' status, and to monitor and manage its harvest.
				Rare 71/	--		
				Stable	CC		

FOOTNOTES FOR AMERICAN GINSENG TABLE

[NOTE.—A complete reference to footnotes used in these or previous tables may be found in 43 FR 29491, July 7, 1978.]

3. Tucker, G. E., 1974. Threatened Native Plants of Arkansas. In *Arkansas Area Plan*. Arkansas Department of Planning. Little Rock, Ark. pp. 39-65.

4. Barkley, S., January 6, 1978. Public Input Received In Response To Proposed Listing Of American Ginseng (*Panax quinquefolius*) As A Federally-Endangered Or Threatened Species. Unpublished report.

9. McCollum, J. L. (Editor), 1974. "Endangered Species of Georgia." Georgia Department of Natural Resources. Atlanta, Ga. 66 pp.

10. Mohlenbrock, D. H., and J. W. Voigt, 1959. *A Flora of Southern Illinois*. Southern Illinois University Press. Carbondale, Ill. 390 pp.

11. Letter dated September 7, 1978, from J. Schwegman, Illinois Department of Conservation.

12. Memorandum, semi-final list of Endangered and Threatened Plants, dated January 18, 1978, by C. J. Sheviak, Director, Endangered Plants Project, Illinois Natural Land Institute.

13. Correspondence dated December 29, 1976, from R. D. Feldt, Indiana Department of Natural Resources.

14. Letter dated October 4, 1977, from J. D. Cloud, Indiana Department of Natural Resources.

17. Kartesz, J. T., and R. Kartesz, 1977. *The Biota of North America Part 1: Vascular Plants. Volume I: Rare Plants*. Biota of North America Committee. Pittsburgh, Pa. 361 pp.

27. Minnesota Department of Natural Resources, 1975. "Animals and Plants Which Merit Special Consideration and Management * * * the Uncommon Ones." 32 pp.

36. Letter dated October 4, 1977, from H. Jannback, New York State Science Service.

48. Letter dated August 17, 1977, from M. K. Goddard, Pennsylvania Department of Environmental Resources.

49. Letter dated August 17, 1977, from W.

E. Buker, Carnegie Museum.

50. Letter dated August 25, 1977, from J. Adams, Morris Arboretum.

51. Letter dated August 26, 1977, from J. M. Fogg, Arboretum of the Barnes Foundation.

52. Letter dated August 28, 1977, from E. J. Wherry.

53. Letter dated August 29, 1977, from C. L. Bryne, Waynesburg College.

54. Letter dated October 26, 1977, from K. A. Friedman, Lehigh Valley Conservancy, Inc.

60. Sharp, A. J., 1974. Rare Plants of Tennessee. *The Conservationist*, 40 (1): 20-21.

61. Collins, J. L., H. R. DeSelm, A. M. Evans, R. Kral, B. E. Wofford. No date. *The Rare Vascular Plants of Tennessee*. Unpublished manuscript. 26 pp.

62. Letter dated August 23, 1978, from E. T. Browne, Jr., Memphis State University.

63. Letter dated May 9, 1978, from B. R. Allison, Tennessee Department of Conservation.

65. Letter dated September 6, 1977, from E. J. Shiflet, Virginia Secretary of Commerce and Resources.

66. Letter dated September 15, 1977, from D. M. Porter, Virginia Polytechnic Institute and State University.

67. Letter dated October 12, 1977, from W. M. Loftis, Jr., Shenandoah National Park.

70. Read, R. H., 1976. Endangered and Threatened Vascular Plants in Wisconsin. *Scientific Areas Preservation Council Technical Bulletin* 92. Wisconsin Department of Natural Resources. 58 pp.

71. Letter dated August 26, 1977, from P. J. Salamun, University of Wisconsin, Milwaukee.

THE 1978-79 EXPORT FINDINGS

In light of the substantial information submitted before and during the comment period for our July 7 and August 7, 1978, proposals, the ESSA adopts the following final export findings for the 1978-79 harvest of bobcat, lynx, and river otter, and the 1978 harvest of American ginseng.

The ESSA adopts these findings using the standards for export approval as stated in its proposed rulemaking of July 7, 1978 (43 FR 29469), and as restated in this document.

The ESSA hereby approves export of specimens of these four species from every State for which approval was proposed on July 7, 1978 (43 FR 29469), or August 7, 1978 (43 FR 35013).

The ESSA hereby approves export of specimens of the four species from the States listed in the supplemental tables above, for which export approval was not previously proposed.

Accordingly, Chapter VIII—Endangered Species Scientific Authority is added to Title 50 of the Code of Federal Regulations, consisting at this time of Part 810—Export of Appendix II Species. The regulations for part 810 have not yet been promulgated; however, the following annex is being added to part 810 at this time to read as follows:

THE 1978-79 ANNEX

States for which the ESSA has approved export of bobcat, lynx, or river otter harvested in the 1978-79 season, or American ginseng harvested in 1978.

NOTE.—The Letter "A" indicates export approval. Export of bobcat pelts from New Mexico and Wyoming must be limited to the numbers given in the table. For all other States, the ESSA is unable to find that export will not be detrimental to the survival of these species. For further information see: 43 FR 29469-29491 (July 7, 1978), 43 FR 35013-35015 (August 7, 1978), 43 FR 36293 (August 16, 1978), 43 FR [insert number first page this document] (September 1, 1978).

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<u>State</u>	<u>Bobcat</u>	<u>Lynx</u>	<u>River Otter</u>	<u>American Ginseng</u>
Alabama	A		A	
Alaska		A	A	
Arizona	A			
Arkansas	A		A	A
California	A			
Colorado	A			
Connecticut			A	
Delaware			A	
Florida	A		A	
Georgia	A		A	A
Idaho	A	A		
Illinois				A
Indiana				A
Iowa				A
Kansas	A			
Kentucky				A
Louisiana	A		A	
Maine	A		A	
Maryland			A	A
Massachusetts	A		A	
Michigan	A		A	A
Minnesota	A	A	A	A
Mississippi	A		A	
Missouri				A
Montana	A	A	A	
Nebraska	A			
Nevada	A			
New Hampshire			A	
New Mexico	A: Q6,000			
New York	A		A	A
North Carolina	A		A	A
North Dakota	A			
Oklahoma	A			
Oregon	A		A	
Pennsylvania				A
Rhode Island			A	
South Carolina	A		A	
South Dakota	A			
Tennessee	A			A
Texas	A			
Vermont	A		A	
Virginia	A		A	A
Washington	A	A	A	
West Virginia	A			A
Wisconsin	A		A	A
Wyoming	A: Q2,000			
Navajo Nation	A			

Publication of these findings has been approved by the Members of the Endangered Species Scientific Authority.

Dated: August 30, 1978.

WILLIAM Y. BROWN,
*Executive Secretary,
Endangered
Species Scientific Authority.*

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