

APPENDICES

Appendix A
Definitions of Categories used in Table 2.1. Status of Target Species,
Worldwide and in the PNW.

Definitions from IUCN Red List Categories 1994

Criteria for included species:

- Taxonomy, biology and distribution of the species must be understood.
- The species must be threatened or extinct on a world-wide scale.
- There must be considerable documentation showing that the species is threatened.
- The species should be narrowly distributed, or known from a few localities.
- The species should not be under-collected.

Red List Categories:

Extinct: there is no reasonable doubt that the last individual has died.

Critically Endangered: a. an observed or suspected reduction of at least 80% over the last 10 years, or a projected reduction of at least 80% in the next ten years.

b. Occupied area estimated to be less than 10 km².

c. Population estimated to be less than 250 individuals with a further expected decline.

d. Population estimated to be less than 50 individuals.

e. Qualitative analysis shows that the probability of extinction is at least 50% within 10 years.

Endangered: a. an observed or suspected reduction of at least 50% over the last 10 years, or a projected reduction of at least 50% in the next ten years.

b. Occupied area estimated to be less than 500 km² and either severely fragmented or known to exist in 5 locations or less and/or continuing decline is observed or projected.

c. Population estimated to be less than 2500 individuals with a further expected decline where either the populations are severely fragmented with no subpopulation containing more than 250 individuals or all individuals are in a single subpopulation.

d. Population estimated to be less than 50 individuals.

e. Qualitative analysis shows that the probability of extinction is at least 20% within 20 years.

Vulnerable: a. an observed or suspected reduction of at least 20% over the last 10 years, or a projected reduction of at least 20% in the next ten years.

b. Occupied area estimated to be less than 2000 km² and either severely fragmented or known to exist in 10 locations or less and/or continuing decline is observed or projected.

c. Population estimated to be less than 10000 individuals with a further expected decline where either the populations are severely fragmented with no subpopulation containing more than 250 individuals or all individuals are in a single subpopulation.

d. Population estimated to be less than 10000 individuals or the population is restricted to less than 100 km² or in the number of locations (typically less than 5), where the taxon would be prone to the effects of human activities or chance events whose impacts are increased by human activities within the foreseeable future, thus capable of becoming Extinct or Critically Endangered.

e. Qualitative analysis shows that the probability of extinction is at least 10% within 100 years.

**Natural Heritage Program Definitions (from ONHP webpage):
DEFINITIONS**

Endangered taxa are those which are in danger of becoming extinct within the foreseeable future throughout all or a significant portion of their range.

Threatened taxa are those likely to become endangered within the foreseeable future.

LE = Listed Endangered. Taxa listed by the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) as Endangered under the Endangered Species Act (ESA), or by the Departments of Agriculture (ODA) and Fish and Wildlife (ODFW) of the state of Oregon under the Oregon Endangered Species Act of 1987 (OESA).

LT = Listed Threatened. Taxa listed by the USFWS, NMFS, ODA, or ODFW as Threatened.

PE = Proposed Endangered. Taxa proposed by the USFWS or NMFS to be listed as Endangered under the ESA or by ODFW or ODA under the OESA.

PT = Proposed Threatened. Taxa proposed by the USFWS or NMFS to be listed as Threatened under the ESA or by ODFW or ODA under the OESA.

C = Candidate taxa for which NMFS or USFWS have sufficient information to support a proposal to list under the ESA, or which is a candidate for listing by the ODA under the OESA.

SoC = Species of Concern. Former USFWS C2 candidates which need additional information in order to propose as Threatened or Endangered under the ESA. These are species which USFWS is reviewing for consideration as Candidates for listing under the ESA.

Definitions for the Oregon Natural Heritage Program Lists 1-4

The Oregon Natural Heritage Program Lists (ORNHP) were originally developed by the California Native Plant Society, and are used in their publications. The criteria for the Heritage Program lists are as follows:

List 1 contains taxa that are threatened with extinction or presumed to be extinct throughout their entire range.

List 2 contains taxa that are threatened with extirpation or presumed to be extirpated from the state of Oregon. These are often peripheral or disjunct species which are of concern when considering species diversity within Oregon's borders. They can be very significant when protecting the genetic diversity of a taxon. ORNHP regards extreme rarity as a significant threat and has included species which are very rare in Oregon on this list.

List 3 contains species for which more information is needed before status can be determined, but which may be threatened or endangered in Oregon or throughout their range.

List 4 contains taxa which are of conservation concern but are not currently threatened or endangered. This includes taxa which are very rare but are currently secure, as well as taxa which are declining in numbers or habitat but are still too common to be proposed as threatened or endangered. While these taxa currently may not need the same active management attention as threatened or endangered taxa, they do require continued monitoring.

Taxa Considered but Rejected contains all taxa deleted from any of the above lists in previous editions of this booklet. Taxa dropped from the list since the last book (1995) are also included in the main list.

The Nature Conservancy - Natural Heritage Network Ranks

ORNHP participates in a national system for ranking rare, threatened and endangered species throughout the world. The system was developed by TNC and is used in Heritage Programs or Conservation Data Centers (CDCs) in all 50 states, in 4 Canadian provinces, and in 13 Latin American countries. The ranking is a 1-5 scale, primarily based on the number of known occurrences, but also including threats, sensitivity, area occupied, and other biological factors. In this book, the ranks occupy two lines. The top line is the Global Rank and begins with a "G". If the taxon has a trinomial (a subspecies, variety or recognized race), this is followed by a "T" rank indicator. A "Q" at the end of this line indicates the taxon has taxonomic questions. The second line is the State Rank and begins with the letter "S". The ranks are summarized below:

1 = Critically imperiled because of extreme rarity or because it is somehow especially vulnerable to extinction or extirpation, typically with 5 or fewer occurrences.

2 = Imperiled because of rarity or because other factors demonstrably make it very vulnerable to extinction (extirpation), typically with 6-20 occurrences.

3 = Rare, uncommon or threatened, but not immediately imperiled, typically with 21-100 occurrences.

4 = Not rare and apparently secure, but with cause for long-term concern, usually with more than 100 occurrences.

5 = Demonstrably widespread, abundant, and secure.

H = Historical Occurrence, formerly part of the native biota with the implied expectation that it may be rediscovered.

X = Presumed extirpated or extinct.

U = Unknown rank.

? = Not yet ranked, or assigned rank is uncertain.

Definitions from: Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents within the Range of the Northern Spotted Owl (USFS Region 6):

C1= manage known sites
C2= survey prior to activities and manage known sites
C3= conduct extensive surveys and manage sites
C4= conduct general regional surveys

USFS definitions:

S = Sensitive Species: Taxa that are identified by the Regional Forester for which viability is a concern, as evidenced by significant current or predicted downward trends in habitat capability that would reduce a species existing distribution (FS Manual 2670).

BLM definitions:

S=Sensitive Species: Taxa: 1. under status review by US Fish and Wildlife Service/Marine Fisheries Service, 2. whose numbers are declining so rapidly that federal listing might become necessary, 3. with typically small and widely dispersed populations, or 4. inhabiting ecological refugia or other specialized unique habitats (BLM Manual 6840, 9/16/88).

Appendix B

Plot Locations for Target Species.

Figure A1. Plot locations in northern Idaho, sampled in 1999.

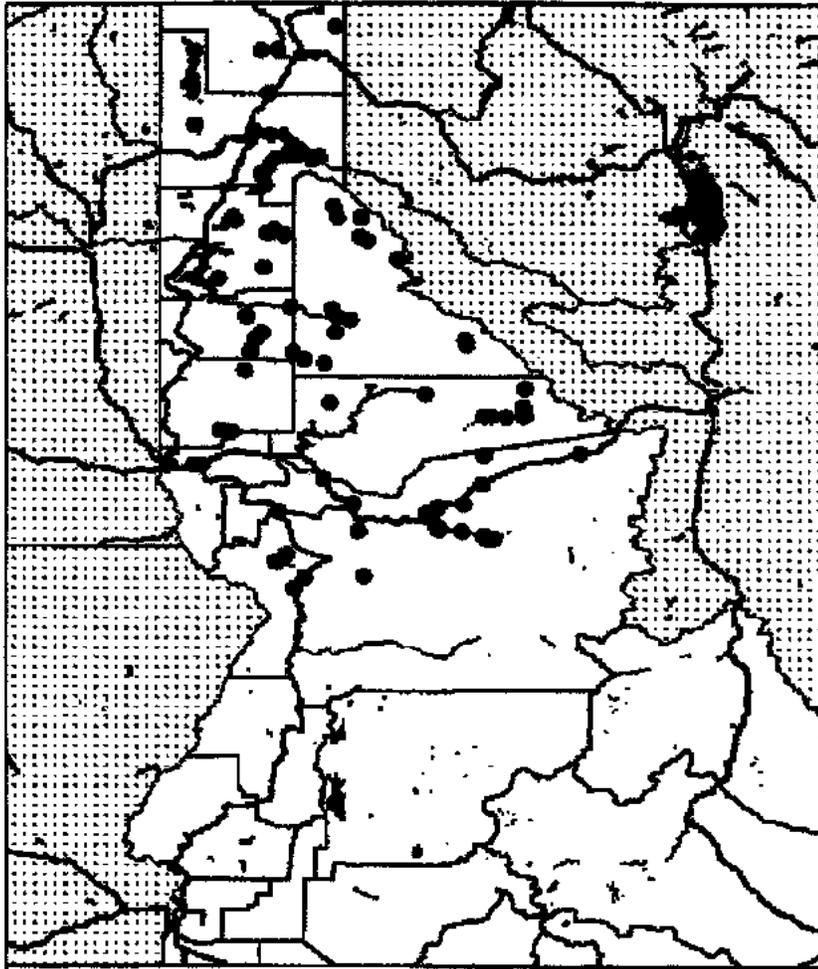


Figure A2. *Cetraria sepincola* locations in northern Idaho and the surrounding area.

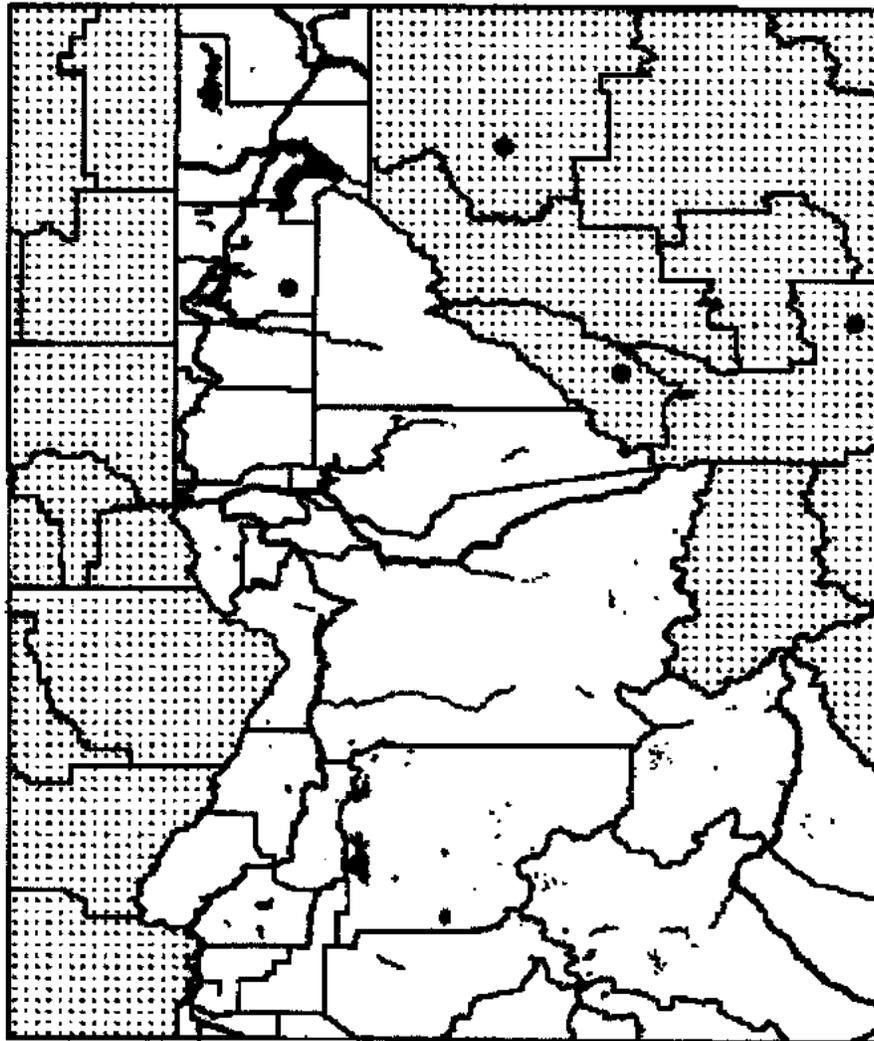


Figure A3. *Collema curtisporum* locations in northern Idaho and the surrounding area.

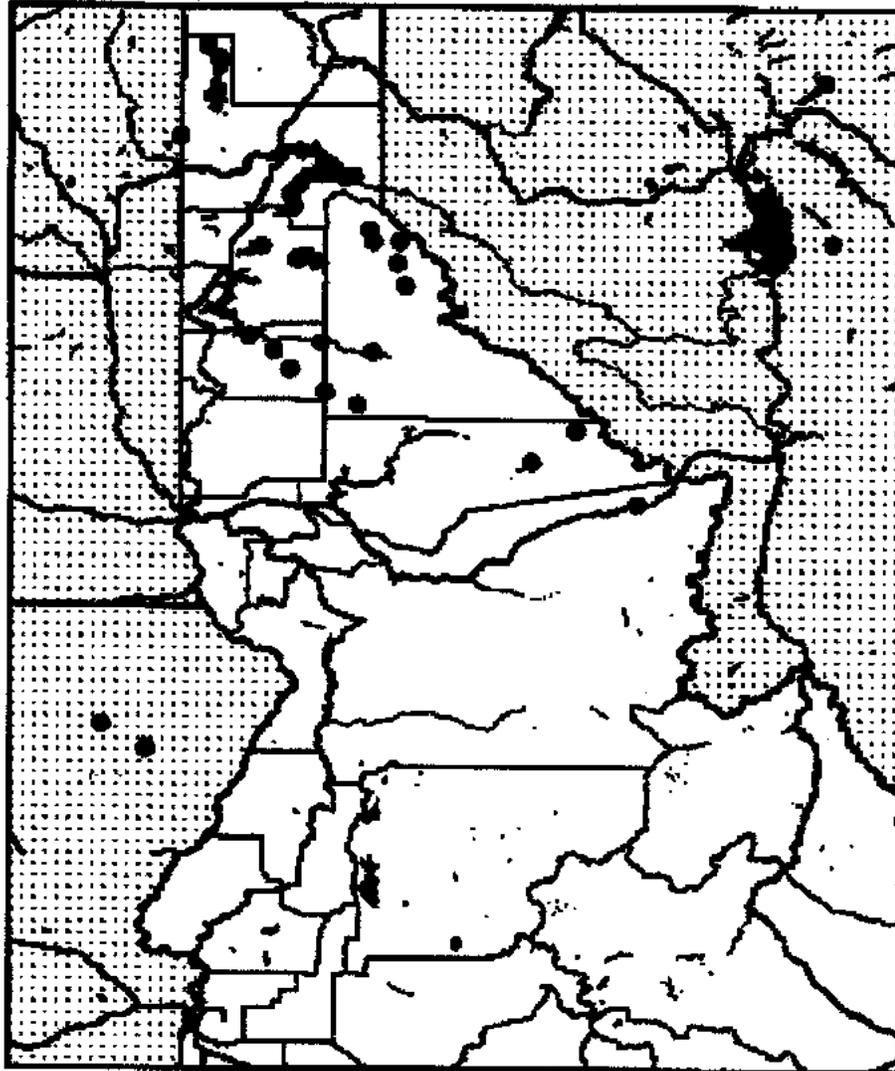


Figure A4. *Collema furfuraceum* locations in northern Idaho only.

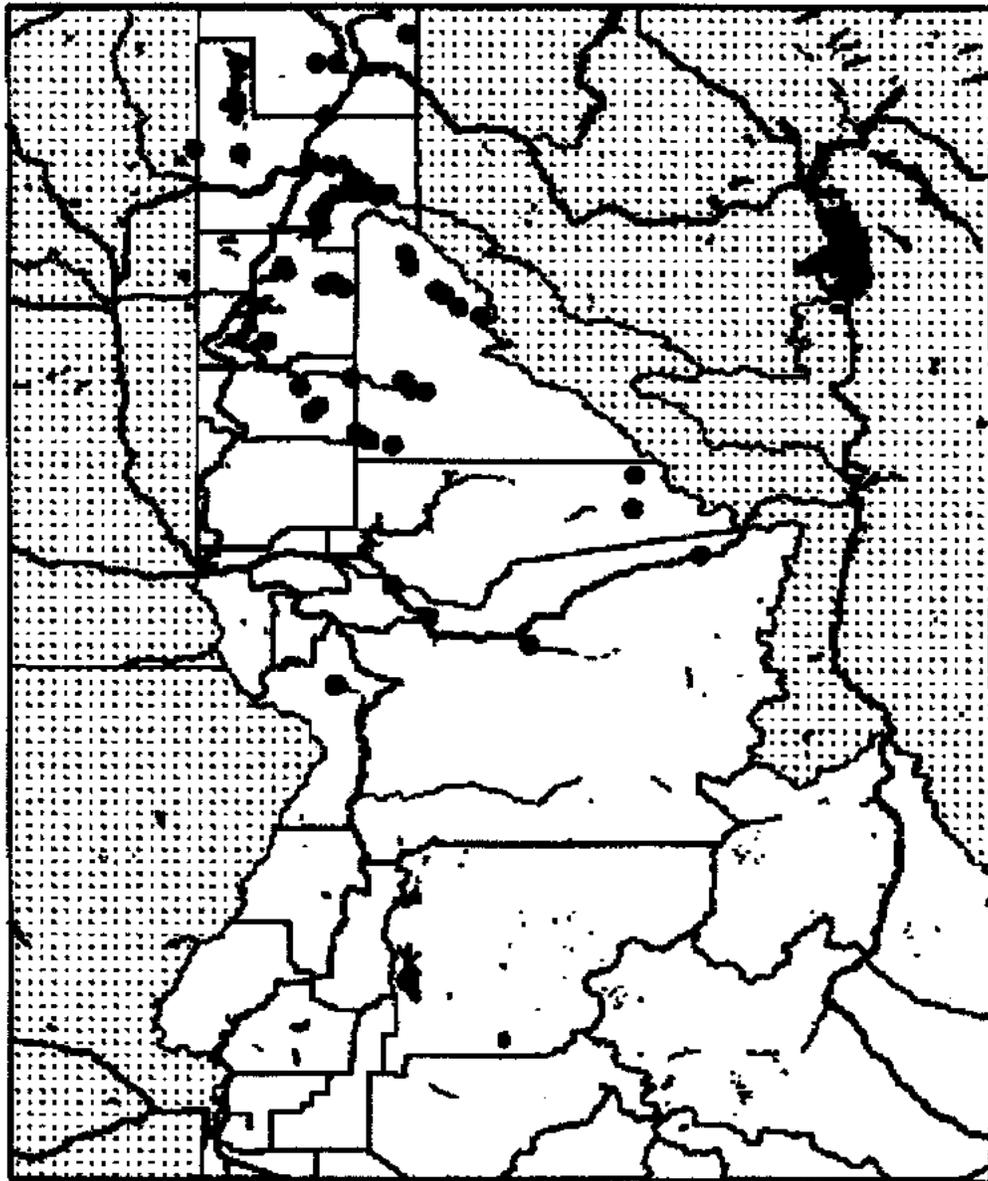


Figure A5. *Lobaria hallii* locations in northern Idaho only.

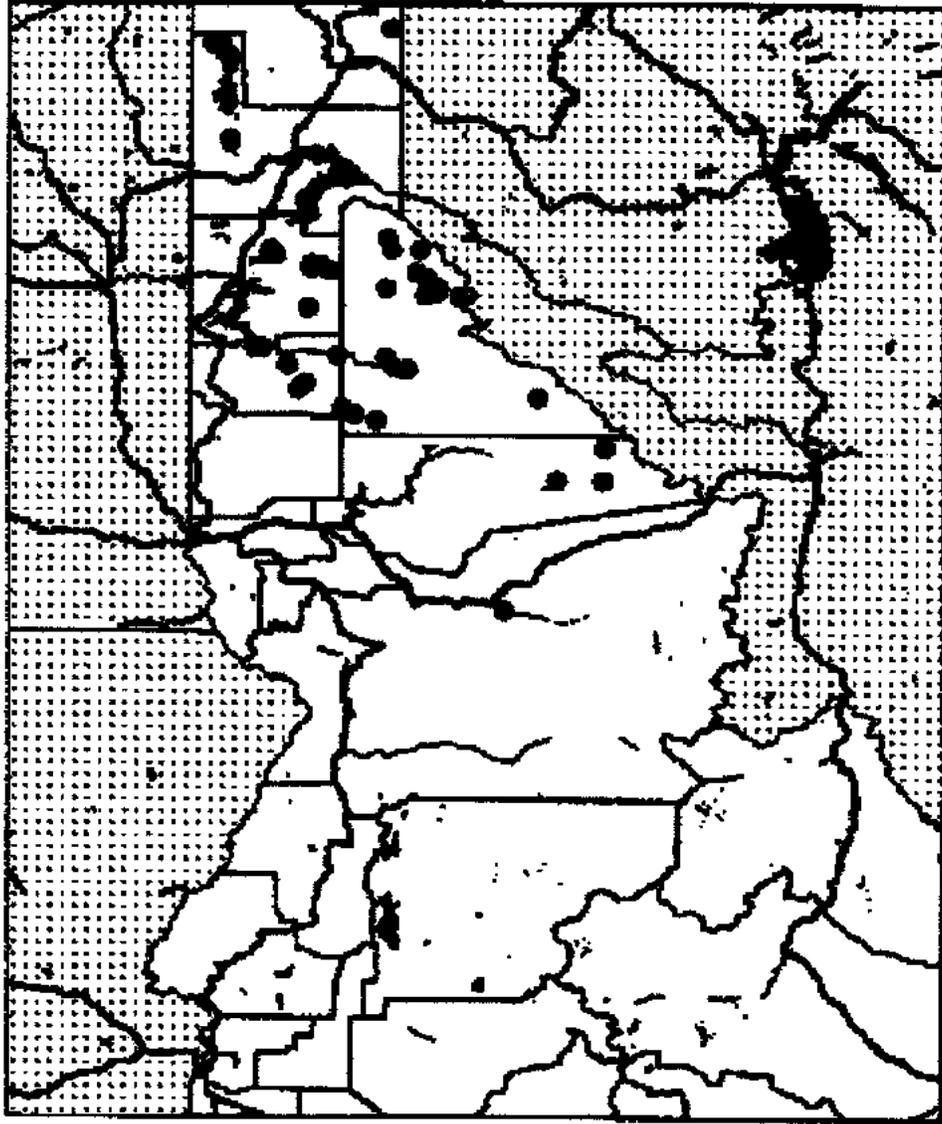


Figure A6. *Lobaria pulmonaria* in northern Idaho only.

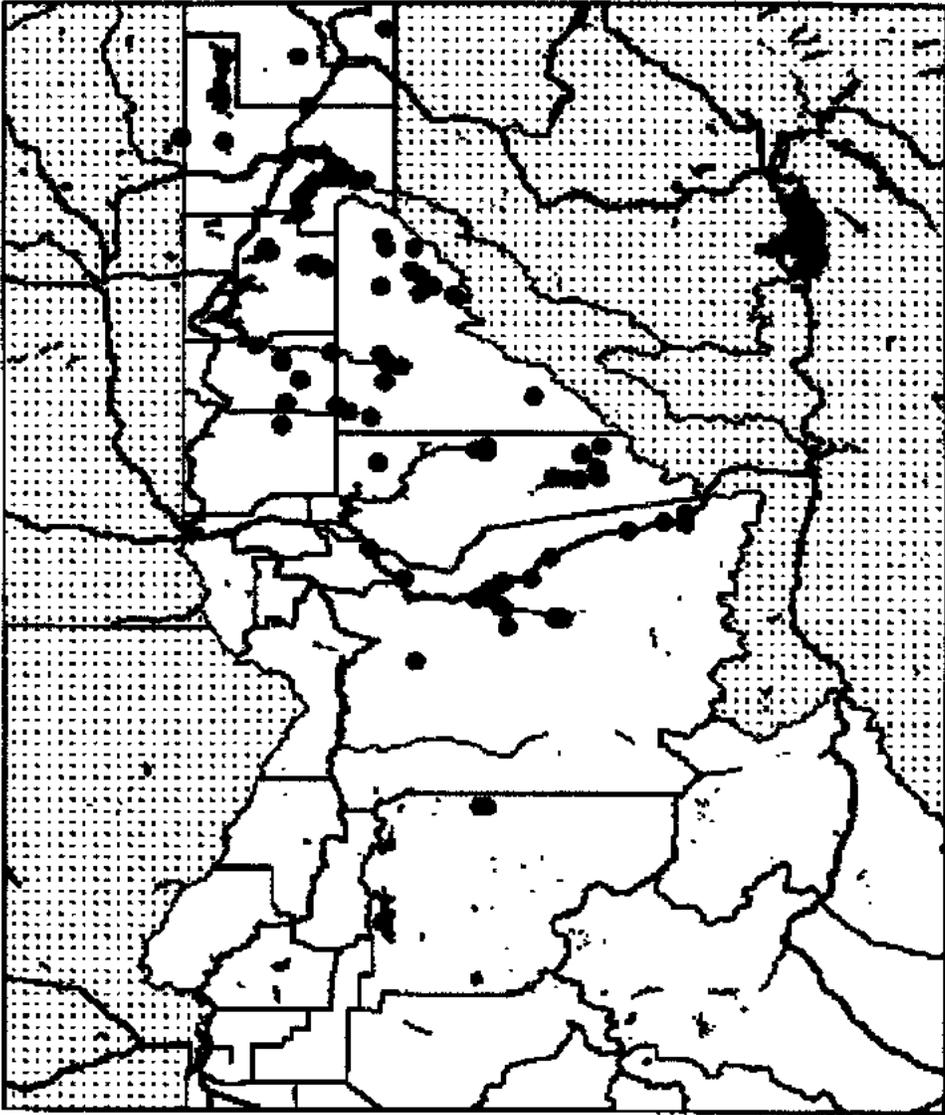


Figure A7. *Physcia semipinnata*. One location near Swan Lake in northwestern Montana.

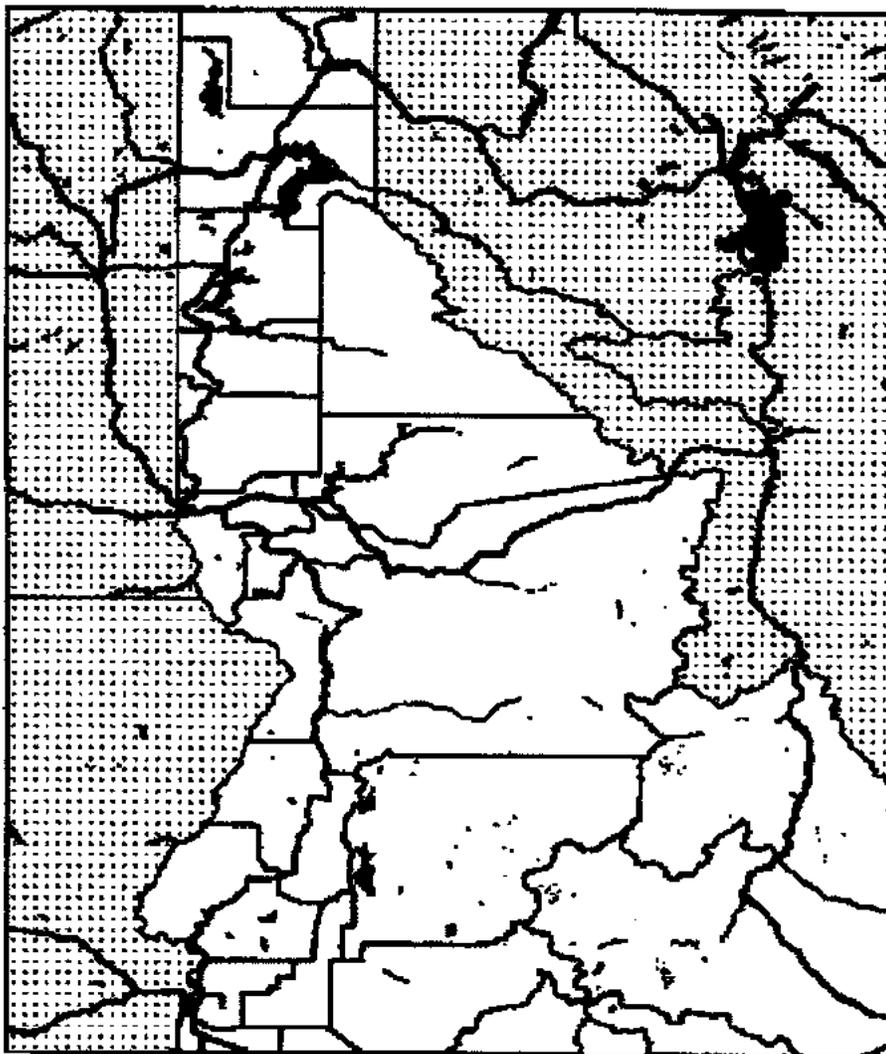


Figure A8. *Physconia americana* locations in northern Idaho and the surrounding area.

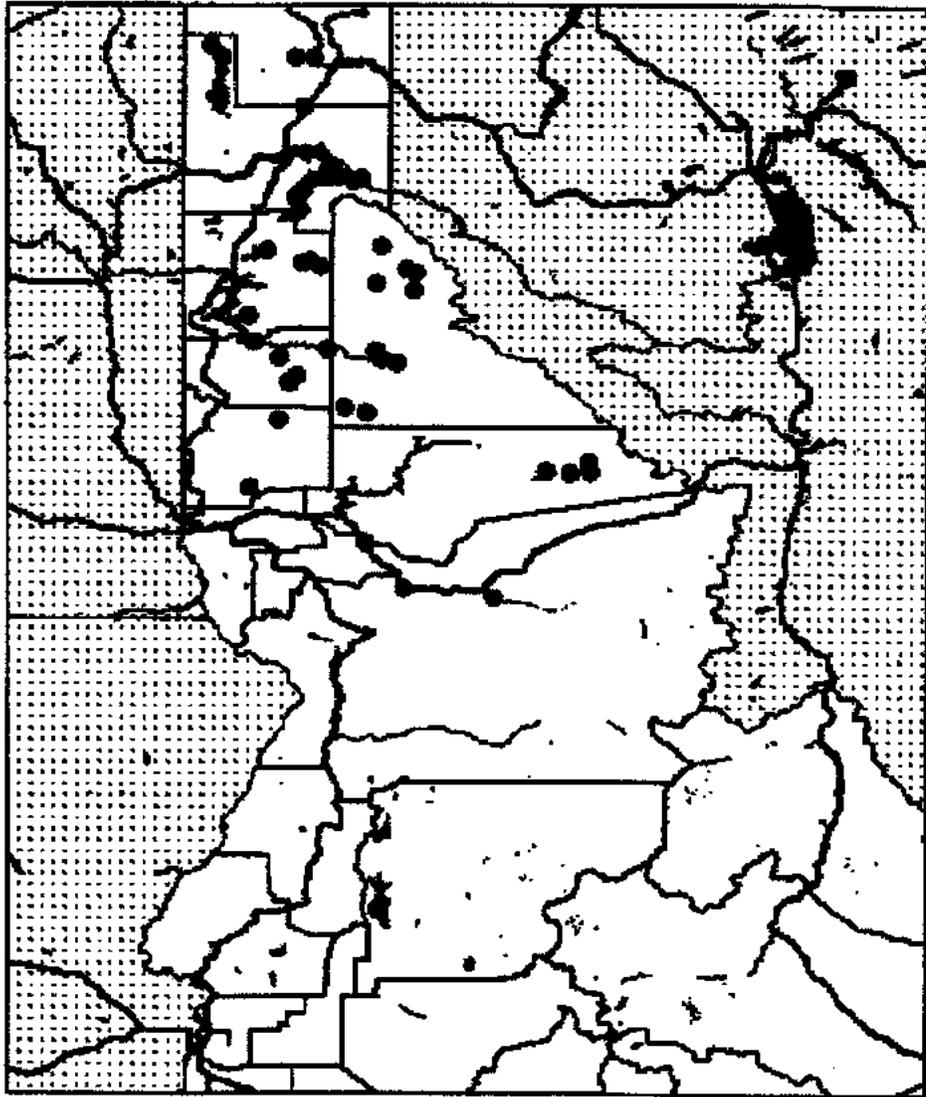


Figure A9. *Pseudocyphellaria anomala* locations in northern Idaho and the surrounding area.

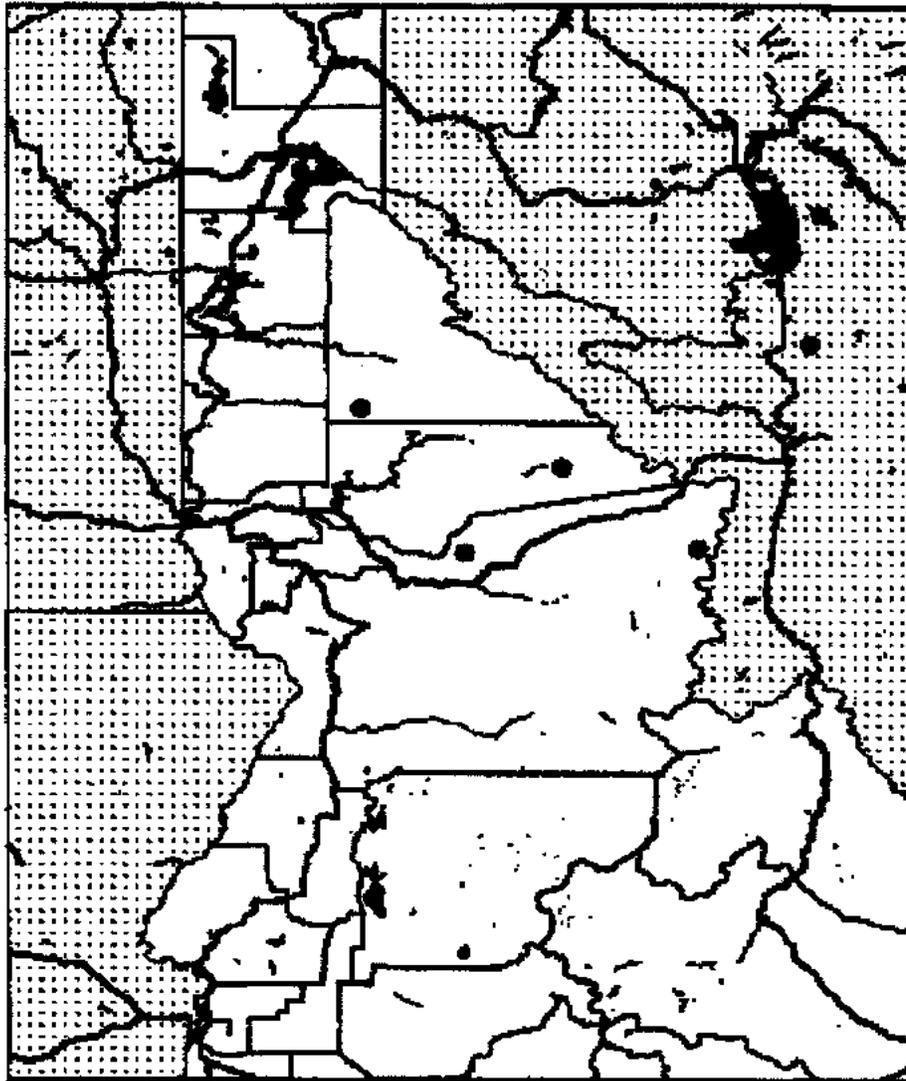


Figure A10. *Pseudocyphellaria anthraspis* locations in northern Idaho and the surrounding area.

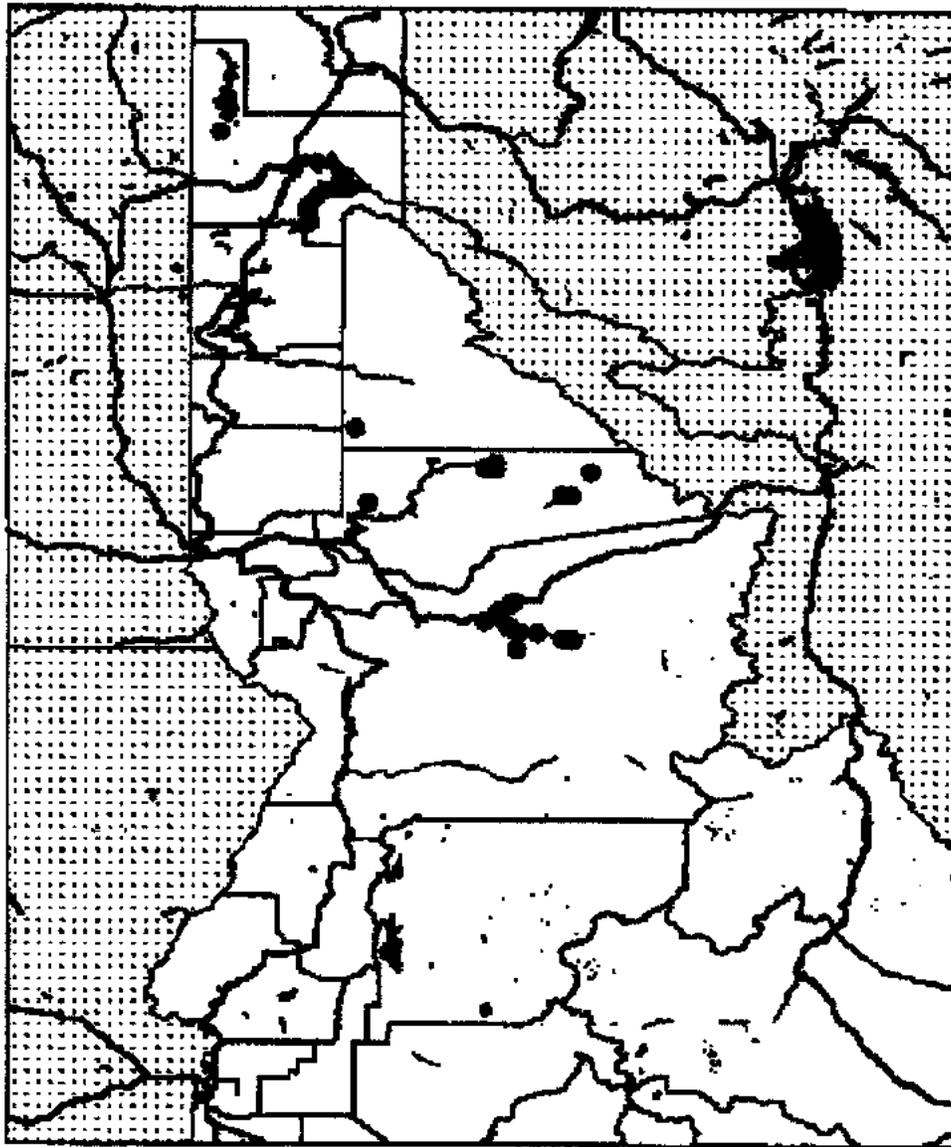


Figure A11. *Ramalina dilacerata* locations in northern Idaho only.

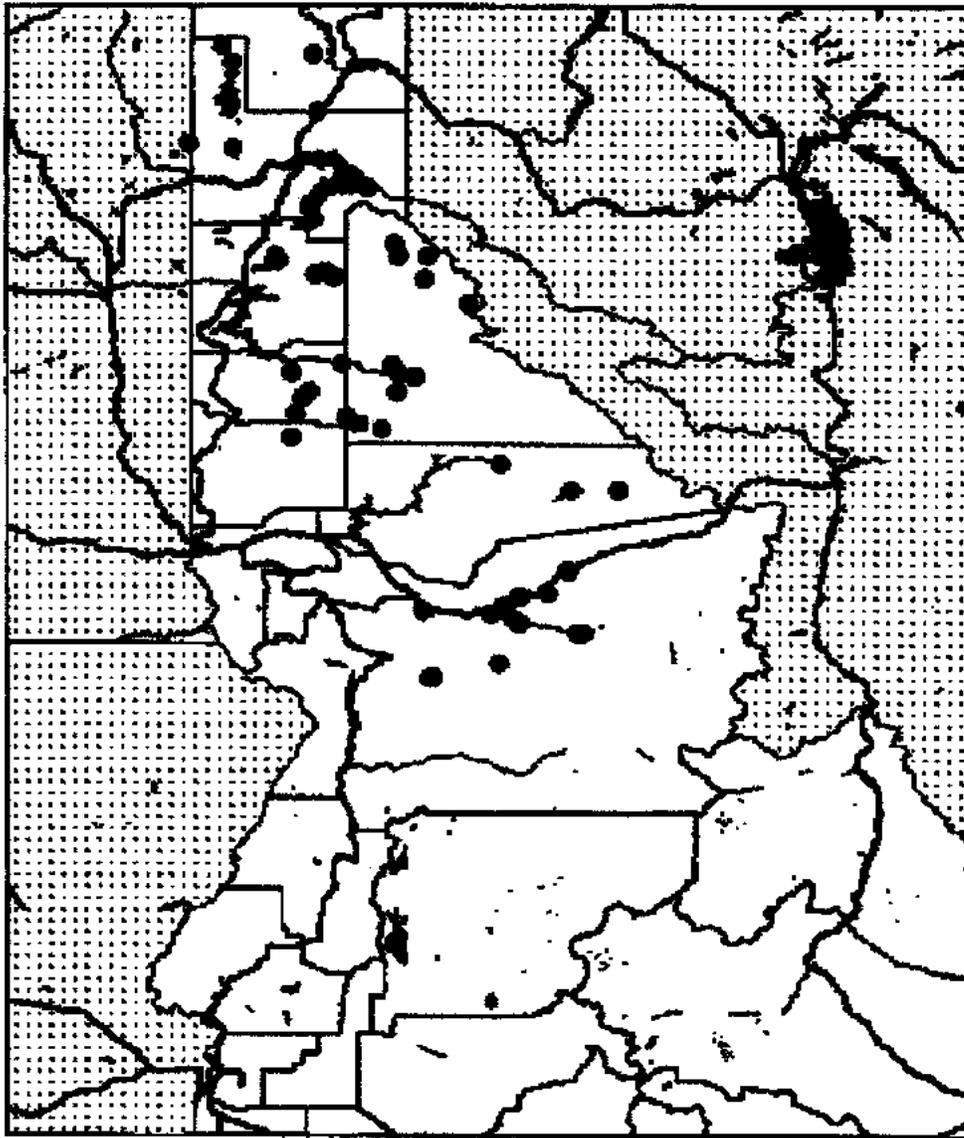


Figure A12. *Ramalina obtusata* locations in northern Idaho and the surrounding area.

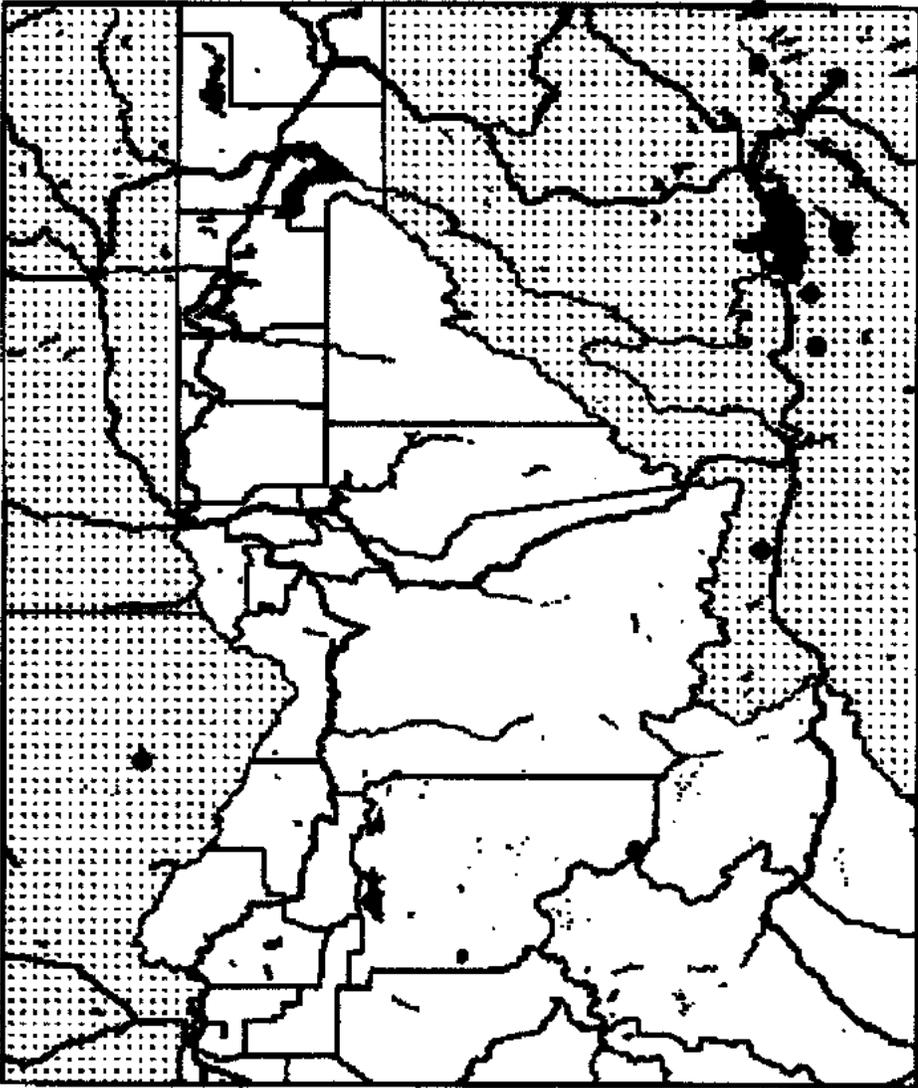


Figure A13. *Ramalina pollinaria* in northern Idaho and the surrounding area.

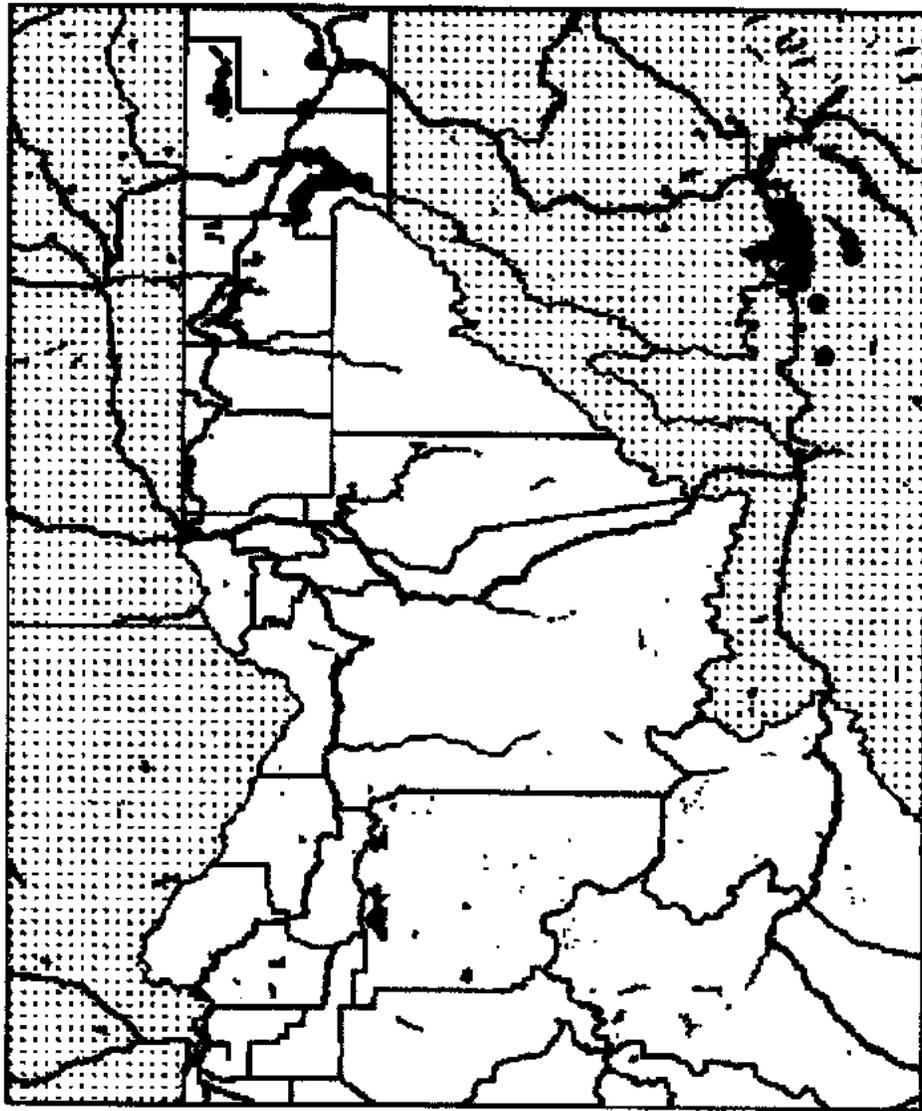


Figure A14. *Ramalina subleptocarpa* locations in northern Idaho and the surrounding area.

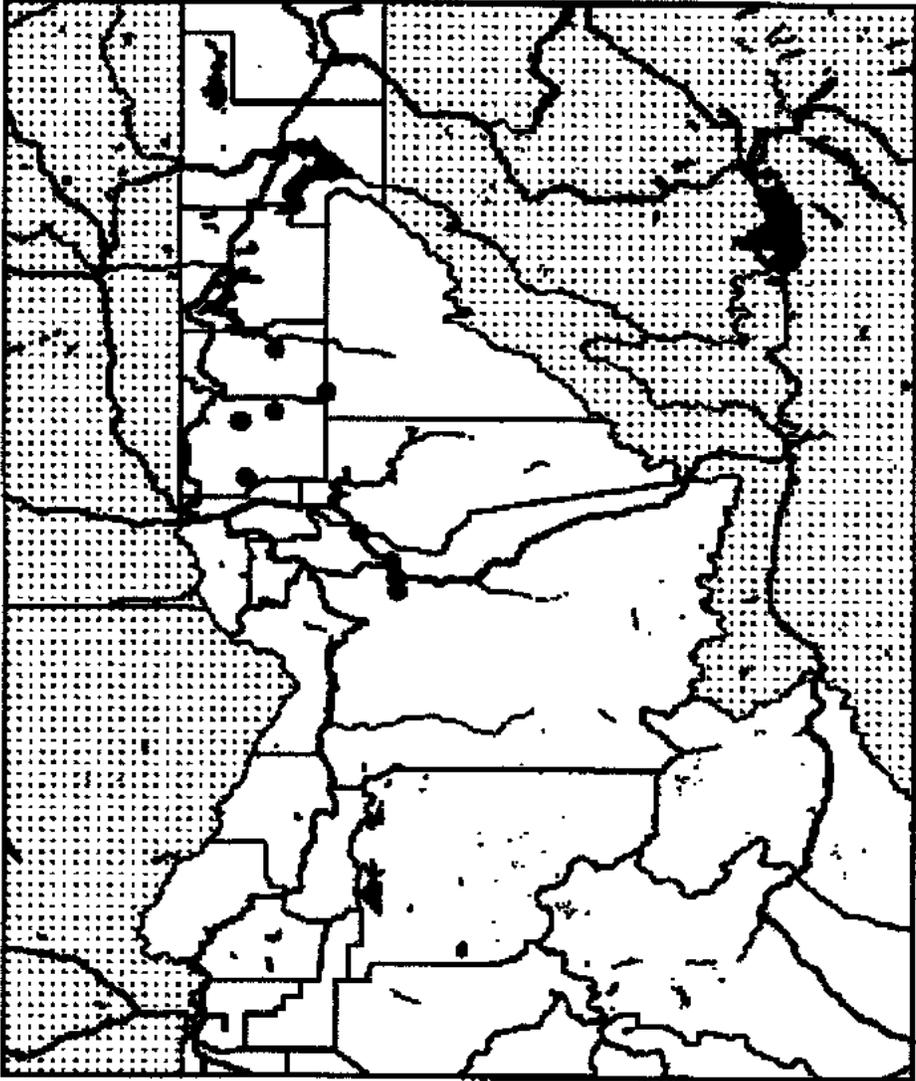


Figure A15. *Ramalina thrausta* locations in northern Idaho only.

