

Native Plant Society of New Mexico ***newsletter***

Special Edition

MARCH 1982

WE HAVE THREE RESPONSIBILITIES TO RARE PLANTS

"Perhaps no aspect of conservation of natural resources has aroused as much controversy as has the issue of threatened and endangered species.

It is probably true that extinction is the ultimate fate of all species, the argument advanced by so many opponents of the attempts at preservation of rare and potentially endangered plants. Extinction, by itself, however, is not the issue or at least not all of the issue. The controversy revolves not only around the extinction of certain rare taxa but also around the disruption and possible elimination of associated habits.

It seems to me, therefore, that those of us with a special interest in the preservation and better understanding of our threatened and endangered plants are faced with several responsibilities:

- 1) to continue to locate and identify potentially endangered or threatened taxa
- 2) to undertake field and laboratory studies relative to the life histories and other features of these plants and to the uniqueness of the habitats in which they exist
- 3) to establish these taxa in cultivation

The preservation of these unique plants must be regarded as a 'forever' project because the insatiable demand for the natural resources so abundant in New Mexico will never cease. "

Dr. William C. Martin
Dept. of Biology
Curator of Herbarium
University of New Mexico,
Albuquerque, N.M. 87131
March, 1982

IN THIS ISSUE
BOTANISTS FROM AROUND NEW MEXICO SAY
RENEW THE ENDANGERED SPECIES ACT

LEARN JUST HOW YOU CAN SPEAK UP FOR
NATIVE PLANTS - WRITE A LETTER
AND SEND A COPY TO KEN BERLIN WHO
WORKS FOR THE RENEWAL IN WASHINGTON

READ ABOUT WHY WE MUST SAVE DIVERSITY

SEE WHO IS ACTING NOW TO RENEW THE ESA

THE FORCES THAT DESTROY WILD PLANTS MAKE UP
A LONG AND INCREASING LIST:

Strip mining

Construction of houses, shopping centers,
highways, dams, power plants, etc.

Overgrazing by livestock

Some uses of fertilizers, pesticides, herbicides

Floods, fires and other natural disasters

Collection by commercial firms and hobbyists

Environmental changes caused by pollution,
water drainage, population migration

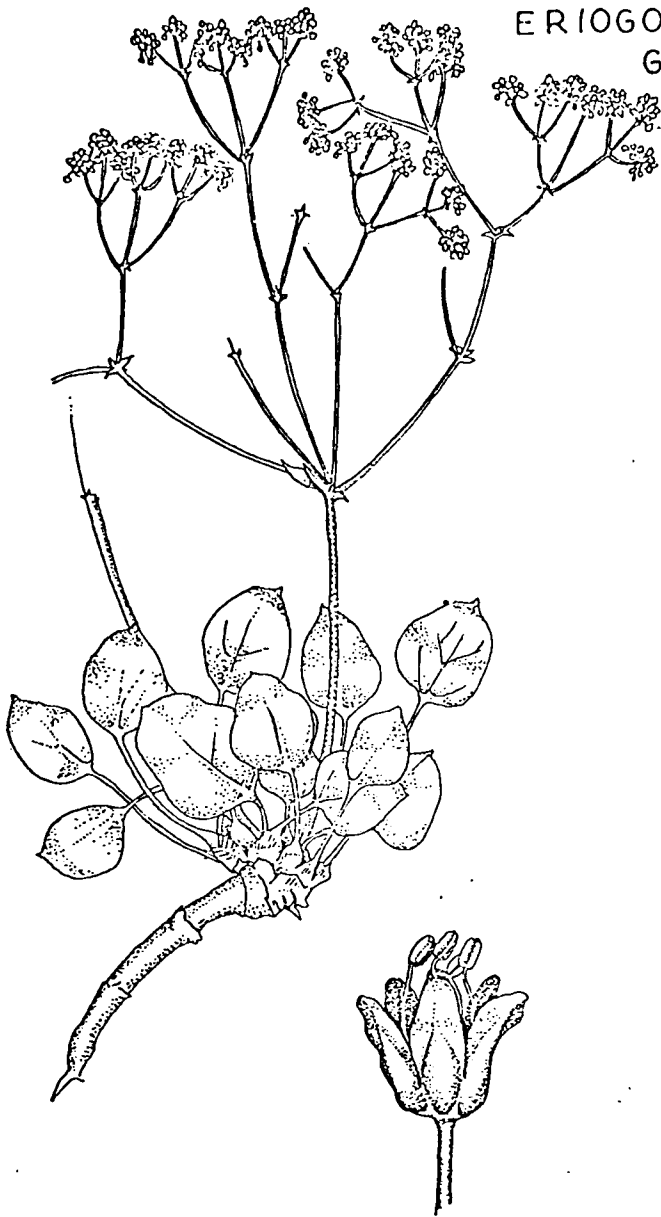
Foreign plants competing too successfully
with native species

Destruction of insect, bird and bat pol-
linators

Introduced foreign diseases

Sue Freeman Miller
Flower and Garden
December 1977

ERIOGONUM
GYPSOPHILUM



FLOWER 50 X

NEW MEXICO IS BOTANICALLY RICH AND UNEXPLORED

There are eight taxa of Federally listed endangered or threatened plants in New Mexico at present. This number represents about 2½ percent of the rare plants which occur in New Mexico. In the last two years, six plant species have been published as new to science in New Mexico. In spite of the fact that New Mexico has had two floras published dealing with the plants occurring in our State, the number of species discovered here continues to increase at a dramatic rate. Over 400 additional species have been detected as occurring here since Dr. William Martin's Flora of New Mexico was published in 1981.

It is clear that New Mexico continues to be a region of great botanical interest and one in which significant new findings are being made. The Endangered Species Act is the only piece of legislation which effectively protects our rare plants. Our state regulations are not enforced, are not up-to-date, and contain many caveats preventing real protection for these species. As such, this Act is our only line of defense against an onslaught of public and private ventures which could overwhelm a very important aspect of New Mexico's natural heritage.

Few, if any, of these rare plants are well understood biologically. They are rare for a reason (or reasons). Learning why such plants are rare adds much to our fund of information in basic plant biology. Others have said much about possible future uses of rare plants in a variety of applications. We cannot afford to throw away that which we do not understand or yet fully appreciate.

A USEFUL PUBLICATION ON ENDANGERED SPECIES

Extinction - The Causes and Consequences of the Disappearance of Species, 1981. (\$15.95)
Paul and Anne Ehrlich document the biological, economic, and political impacts of the loss of species. Write: Random House, Inc
201 E. 50th St., New York, NY 10022.

Bill F. Isaacs
New Mexico State Heritage Program
Villagra Building
Santa Fe, N.M. 87503

OUR SOCIETY SENT THIS LETTER TO OUR REPS:

"On behalf of approximately 320 members of The Native Plant Society of New Mexico, I am writing in support of Congress re-authorizing the Endangered Species Act.

In particular, we should like the Act to include continuation of the listing process and preservation of critical habitats.

We should also like to see the prohibition against taking or collecting an endangered species extended to plants, and adequate funding given to enforce the prohibition.

Sufficient manpower should also be provided to assist foreign countries with conserving their plant resources.

A membership application form that describes our group's purpose and functions is enclosed for your reference."

REPRESENTATIVE MANUEL LUJAN, JR.'S REPLY:

"Thank you for taking the time to write to me concerning the Endangered Species Act and preservation of plant and animal life.

I am in total agreement with you, Mary; we must by all means protect our wildlife and keep both the animal and plant world from harm. I will do whatever I am able, here in Washington, to preserve our environment. The work that The Native Plant Society is doing is truly laudatory; I wish you and the other members of the Society success in your every endeavor.

Again, thanks for contacting me and advising me of your group's activities.

Best regards,

Manuel Lujan, Jr."

SENATOR PETE DOMENICI'S REPLY:

(Senator Domenici is pivotal in deciding the fate of the Endangered Species Act Reauthorization.)

"Thank you for contacting me to express your views on reauthorization of the Endangered Species Act. I am pleased to learn your thoughts on this subject.

As you know, Congress must act to reauthorize the Endangered Species Act in 1982. The Environment and Public Works Committee, of which I am a member, will conduct exhaustive hearings on the various provisions in this Act, to determine what changes, if any, should be made. Your comments are certainly helpful to me, because it is important I know the views of those I represent.

Again, many thanks for letting me know your thoughts on this important legislation. I will be sure to remember your comments as we continue work on the reauthorization hearings.

Best personal regards.

Sincerely,

Pete V. Domenici
United State Senator"

LETTERWRITING: A FEW HOW TO'S

(courtesy of the National Audubon Society)

Keep it short

Keep it specific with a specific request

Use your own words

Ask for their position

Followup! Do not stand for non-answers

Tie to something else; make it easy to support your position

...and send a copy to Ken Berlin so he can know that your man in Washington has heard from you. See WHAT YOU CAN DO for his address.

FOUR ARGUMENTS FOR PRESERVATION OF SPECIES DIVERSITY

"There are perhaps four arguments central to the question of preservation of species. ... One is rather utilitarian, that is, we use many species for our own support, and with increasing population and agricultural problems, we are learning to use many more from the wild.

Also very applicable to us is a second argument. Life on earth is an ecologically interwoven, nested set of relationships. At one level these relationships form biomes, at another ecosystems, and at yet another, communities. The stability of these systems is due in part to their diversity (numbers of different species). ... The effect of the loss of a single plant species? It has been estimated that the extinction of one species of plant results in the loss of 30 species of animal life.

Third, most of us appreciate diversity, the experience of seeing and learning new things gives us pleasure - it is an aspect of our intellect. It would be unfortunate if this generation, with its knowledge and power to effect change, should gain the reputation to our descendants that we did not care enough to pass life's diversity on to them to see and enjoy and learn from.

Last, ... it may be simply but emphatically stated that other organisms simply have the right to exist. We should consider their presence carefully, for they may well be our only companions in the entire universe."

Richard W. Spellenberg
Professor of Biology
Curator of Herbarium
New Mexico State University
Las Cruces, N.M. 88003
March, 1982

THIS YEAR WE DECIDE WHETHER TO KEEP THE LAW PROTECTING ENDANGERED SPECIES; SOME ARGUE THAT WE ARE ONE OF THEM

"In the 1981 book Extinction, which Paul Ehrlich coauthored with his wife Anne, the extinction of species is compared to rivets being taken out of an airplane. We can take out a lot before the plane falls apart, but we have no way of knowing which rivet will be the one too many.

THE NATURE CONSERVANCY NEWS ANSWERS THE QUESTION "WHY SAVE DIVERSITY?"

The January/February 1982 Nature Conservancy News was entirely devoted to the concept of diversity and its value in our world.

The Nature Conservancy is a national conservation organization committed to the preservation of natural diversity by protecting lands containing the best examples of all components of our natural world.

Their address is:

1800 North Kent Street
Arlington, Virginia 22009
phone (703) 841-5300

Look in future issues of The Native Plant Society Newsletter for reprints from this collection of articles. Write to the above address and ask for a copy. Enclose a small check, if you can.

THE SOLUTION

"Institutions, conservation groups, and government bodies are all involved in protecting endangered species. Ultimately it is the sustained concern of individuals that will keep bulldozers, herbicides, and other tools of modern society from making plant species extinct. Local gardening and conservation groups can adopt a native endangered plant as a conservation responsibility. Several states have conservation groups working on protecting native endangered plants. Two such groups are the California Native Plant Society and the New England Wildflower Society. The Nature Conservancy assists the Federal government in the acquisition of lands to be set aside for preserves. Public understanding of the causes of, and possible solutions to, the problems of endangered species and conservation can be increased.

Bruce Mac Bryde, Raymond Altevogt
U.S. Fish and Wildlife Service
1977

WHAT YOU CAN DO

NEW MEXICO PLANTS LISTED AS THREATENED OR ENDANGERED

- Cactus family
Coryphantha sneedii var. *leei* T
Coryphantha sneedii var. *sneedii* E
Echinocereus kuenzleri E
Pediocactus knowltonii E
Sclerocactus mesae-verdae T
- Mint family
Hedeoma todsenii E
- Buckwheat family
Eriogonum gypsophilum T

NEW MEXICO PLANT PROPOSED FOR THREATENED OR ENDANGERED STATUS

- Mint family
Hedeoma apiculatum

Write letters to Pete Domenici and Manuel Lujan, Jr.. They are both on committees which count in this decision.

Here are their addresses:

The Honorable Pete V. Domenici
 U.S. Senate
 Washington, D.C. 20510

Rep. Manuel Lujan, Jr.
 U.S. House of Representatives
 Washington, D.C. 20515

Send copies of both your letters and any replies you receive to:

Ken Berlin, Chairman
 Endangered Species Act Reauthorization Coordinating Committee
 P.O. Box 50771
 Washington, D.C. 20004

There are at least 300 additional plant species which are being search for, studied, monitored by state and federal agencies in New Mexico. New species are being found and also described every year. Some of these are undoubtedly threatened or endangered. Can we afford to lose the funds and ability to list these species so that they are afforded some protection under the law?

Please write your letters to Rep. Lujan and Senator Domenici and send copies to Ken Berlin in Washington, D. C. His address is in the WHAT YOU CAN DO section of this newsletter.

HEDEOMA TODSENI

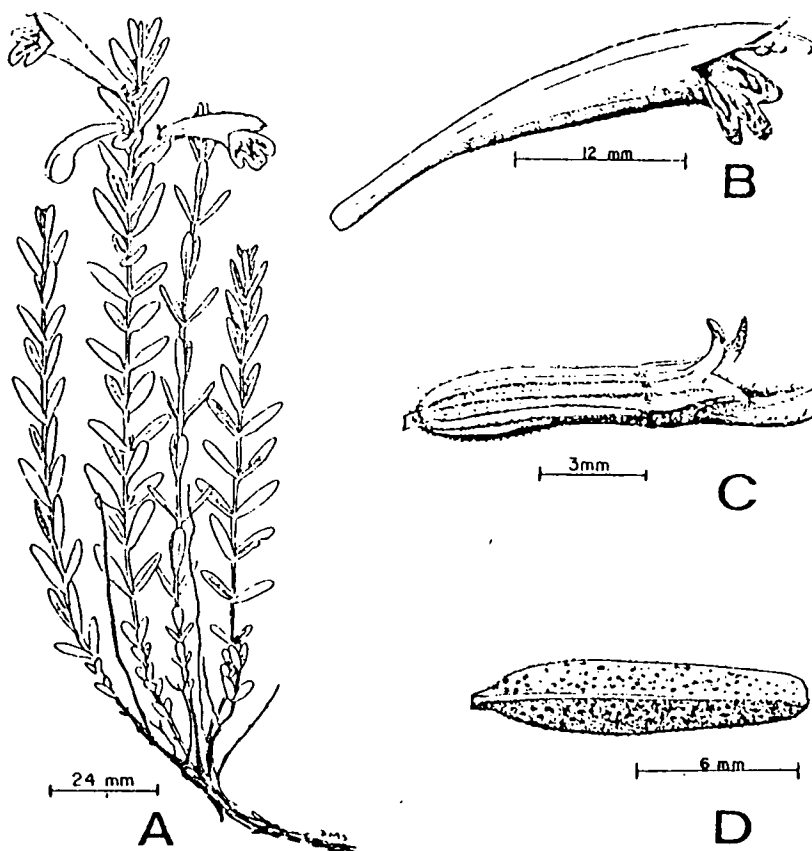


FIG. 1. Drawing of isotype (TEX) of *Hedeoma todsenii* Irving. A. habit; B. corolla; C. calyx; D. leaf undersurface.

EXTINCTION. IT'S FOREVER.

One quarter of all species of animals and plants on Earth may disappear in the next 30 years because of man's destruction of their habitat. The rate of extinctions is increasing enormously as forests are destroyed and other wild areas are lost. Organisms that evolved over hundreds of millions of years will be gone forever. The complex interdependence of all creatures, from the largest mammals to the smallest plants, is being shattered. It is a crisis with profound implications for the survival of all life. Unfortunately, little is being done to save our planet's natural heritage. Here are some warnings by leading scientists:

"The worst thing that can happen—will happen—in the 1980's is not energy depletion, economic collapse, limited nuclear war, or conquest by a totalitarian government. As terrible as these catastrophes would be for us, they can be repaired within a few generations. The one process ongoing in the 1980's that will take millions of years to correct is the loss of genetic and species diversity by the destruction of natural habitats. This is the folly our descendants are least likely to forgive us."

DR. EDWARD O. WILSON

Baird Professor of Science • Harvard University

"We are encroaching on nature, in the U.S. and around the world, at an unprecedented rate. A large proportion of the chemicals in use in our present-day civilization were 'invented' by nature, not by the chemist in the laboratory. An estimated 40% of all drug prescriptions in the U.S. contain as their chief ingredients compounds derived from plants. There is no end to the potential for discovery in nature, because we have only begun the chemical exploration of nature. Tragically, we are burning our library of priceless genetic treasures with our reckless destruction of species."

DR. THOMAS EISNER

Schurman Professor of Biology • Cornell University

"Few problems are less recognized but more important than the accelerating disappearance of Earth's biological resources. In pushing other species to extinction, humanity is busily sawing off the limb on which it is perched."

DR. PAUL EHRLICH

Bing Professor of Population Studies • Stanford University

"The extermination of a quarter of the plant species on Earth during the coming few decades could lose forever the medicines and food sources we need to cure the diseases and hunger that plague mankind."

DR. PETER RAVEN

Director • Missouri Botanical Garden

The Ark is sinking. We need the help of every concerned citizen to conserve the diversity of life on Earth. For information about how you can help, please write to us at:

Save Endangered Species

P.O. Box 50771 • Washington, D.C. 20004

Save Endangered Species

P.O. Box 50771 • Washington, D.C. 20004

Please send me more information about endangered species and how I can help conserve the diversity of life on Earth.

Name _____

Address _____

City _____

State _____ Zip _____

Sponsored by:

- American Institute of Biological Sciences
- Animal Protection Institute of America
- Center for Environmental Education
- Center for Action on Endangered Species
- Defenders of Wildlife
- Environmental Defense Fund
- Florida Audubon Society
- Friends of the Earth
- Friends of the Sea Otter
- Fund for Animals
- Garden Club of America
- Greenpeace U.S.A.
- Humane Society of the United States
- International Council for Bird Preservation
- Massachusetts Audubon Society
- National Audubon Society
- Natural Resources Defense Council
- Sierra Club
- Society for Animal Protective Legislation
- Trout Unlimited
- Wilderness Society
- World Wildlife Fund—U.S.

NPS of NM JOINS OTHERS IN ENDORSING STATEMENT TO RENEW AND STRENGTHEN THE ENDANGERED SPECIES ACT

Here are some excerpts from the twelve-page statement:

"...The Endangered Species Act (ESA) is the most important national program intended to conserve wild plant species. ...However, implementation of the Act has not been adequate, with the result that our rich natural heritage is in great jeopardy.

...Plant conservation is a vital component of any natural resource management and conservation program.

...A quarter of all medical prescriptions sold in the U.S. contain one or more chemicals derived from vascular plants. ...During the last decade, scientists have turned their attention to the evening primroses of the genus Oenothera (many of which are native to New Mexico). The seed of the evening primrose is one of two known sources for an extremely important nutrient; the other is human breast milk. Deficiencies of this nutrient are linked to many widespread and puzzling diseases - from arthritis to eczema. Sixty species of the genus live in the U.S., but two are already listed as endangered and five more are candidates. Scientists fear that their efforts to develop a drug ...may be hampered by these plants' precarious survival.

...In the past year, much of the momentum gradually built up for conservation of rare plants has been lost. ...Listing of additional plant species has come to a standstill. Since the new Administration took office only two plants have been added, and the necessary paperwork for these was completed under the Carter Administration.

...Instead of treating all species of life equally and setting each species' priority by the degree of threat, the Service has attached a higher value to conserving mammals and birds. Thus, a full species of vascular plant, no matter how valuable to man, is less likely to be listed than a subspecies of mammal, bird, fish, reptile, or amphibian.

...Failure to act to conserve these resources could undermine our own standard of living in years to come."

Faith Campbell, Ph.D.
Natural Resources Defense Council
1 (202) 223-8210
February 1982

MARCH '82 SMITHSONIAN DISCUSSES THE "BY-ELECTION ON THE FUTURE OF THE BIOSPHERE"

John P. Wiley, Jr., in "Phenomena, comment and notes" a feature of Smithsonian magazine (your local library probably has it), summarizes the arguments for renewing the Endangered Species Act. He reports that the American Association for the Advancement of Science, Scientists for the Endangered Species Act, and the World Wildlife Fund have met to discuss the issue and have taken some action to educate the public on the role of all species in the world's ecosystems. The role wild plants play in contributing new genes to plant breeding programs (corn, wheat and rice, for example) is illustrated. Prominent biologists are quoted, such as Paul Ehrlich and Thomas Eisner.

"This is one the biologists simply have to come out of the woodwork on," said Paul Ehrlich.

The author concludes the article with his thoughts:

"I find myself thinking in terms of adding a small check for the Nature Conservancy to the monthly bill-paying spree, and letting the backyard revert to what in my neighborhood passes for wild. I've already mowed down two box turtles, a nest with eight white eggs and a southeastern scarlet snake: enough is enough. Perhaps a bird that stops there for a moment in spring or fall will be just the bird that plays a keystone role in an ecosystem hundreds of miles away.

"The impact of my little gestures will never be measured. But by September 30 we will have some indication of how the country feels in 1982 about species going extinct. The proverbial glass will be a little fuller or a little emptier."

