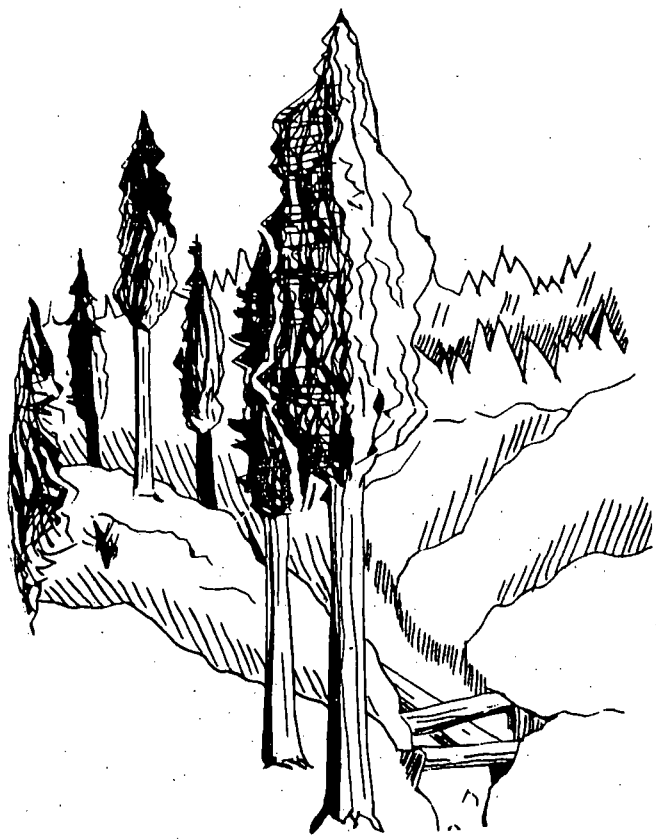
# EMERALD CREEK



Redwood National Park's Last Chance
for a Virgin Watershed

# WATERSHED NEEDED

This is an informational article to alert you to the pending loss of a national heritage. With so many imminent threats confronting our society the diappearance of one of the last virgin redwood watersheds could well slip by with scant notice. However, in years to come, the extinction of this non-renewable resource will have increasing repercussions. Our hope is to preserve it for posterity.

Figures on redwood acreage are misleading. There is approximately 150,000 acres saved in redwood parks, half of which is prime redwood acreage. Because of this some contend that there is no need for further concern. This might have been true if the selection of those preserved areas had been ecologically guided. However, little consideration was given to the natural divisions of watersheds. Stone and Associates, a vegetation management consultant firm, was commissioned in 1969 by the National Park Service to study the problem of incomplete watersheds. They concluded that the way to acheive true preservation of redwoods is to acquire park ownership of entire watersheds, thereby allowing park personnel to carry out necessary management and minimizing danger to the Park from outside forces. (1)

For reasons ranging from lack of knowledge to a complex economic-political situation dictating compromise, none of the present sanctuaries contain a total pristine watershed, essential for a comphrehensive and accurate study of this unique resource. Even the Redwood National Park was a victim of compromise, being composed of less than fifty per cent of Lost Man and Mill Creek watersheds and a paltry ten per cent of the Redwood Creek watershed.

## ROCKEFELLER FOREST DISASTER

A classic example of the inadequacy of partial watershed preserves is the Rockefellar Forest in the Bull Creek watershed of Humboldt Redwood State Park. Here in the largest state owned redwood park, some of the finest old growth redwoods existed on alluvial flats of Bull Creek.

Between the years of 1946 and 1955, the privately owned upper slopes of this Bull Creek watershed were cut over in full accordance with the rules and regulations of the California Forest Practice Act. In 1955 a forest fire burned out another large portion of this watershed. When unusally heavy rains fell on these acres of denuded slopes in December of 1955, excessive runoff and stream sedimentation resulted. Though these same virgin redwoods must have withstood similar storms in the past, an unprecedented flood from the devastated watershed lands occured. Thus, in the 1955 and later 1964 floods, more than 500 magnificent redwoods preserved within the Park were killed. (2) The destruction of the upper watershed was clearly implicated in this catastrophe.

The visual blight and barrenness of clearcut slopes directly above the Redwood National Park boundary, serve as a sinister

warning against the possibility of such a disaster there, and as bleak evidence of our present inadequate protection of redwoods. A concensus of experts, including the group commissioned by the National Park Service, recognizes the only solution as the preservation of an entire virgin redwood watershed area. And the last one remaining in the Redwood Creek drainage is Emerald Creek.

## EMERALD CREEK

Emerald Creek is nourished by an 1800 acre watershed that feeds into Redwood Creek. Within it are close to 900 redwood dominant acres, including 400 acres of the finest old growth yet surviving. Nowhere was there a sign of man until 1969. This irreplaceable remnent of the creative forces is yielding to the relentless chainsaw. Over 300 acres were cut in 1970 and 1971, and the lumbering is proceeding at an alarming rate. Currently, only the upper slope portions of predominantly old growth Douglas-fir have been affected; the prime redwood communities have not yet been disturbed. Therefore, saving the remainder of Emerald Creek watershed has become an extreme emergency.

The values of a protected Emerald Creek are basically the same as those of any wilderness tract. The economic worth of wilderness is not easily perceived. Many sincere and valid questions have been raised. After all, are we not removing valuable timber permanently from the market? Without a harvest what benefit lies in preservation?

This dilemma of immediate cash versus the less apparent long-term yield of wilderness was deliberated by a distinguished group of scholars. A staff of 152 corresponding consultants in 58 countries was commissioned by the U.N. Secretary General. In their final report to the U.N. Conference on Human Environment, they stated:

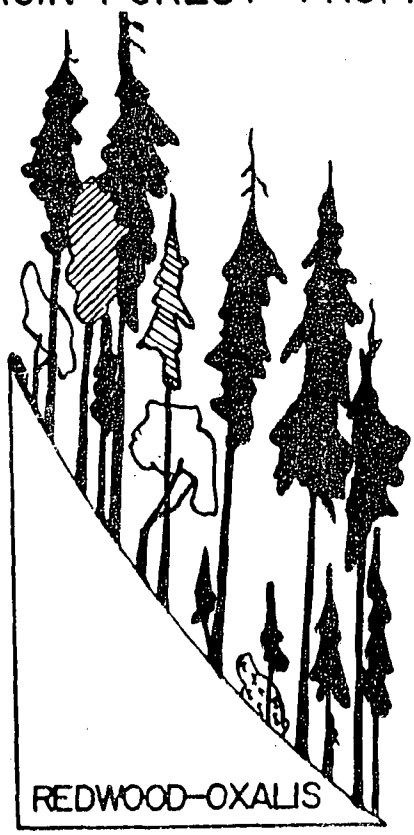
> ". . . The still untouched domains of nature, the still living multitude of natural species are essential for the work of both the scientist and the artist. They are needed to complete our still patchy knowledge of the interdependence of living things and the underlying balances of the natural order not yet disturbed by man. They are needed to preserve the images of variety of plants and animals without which the human imagination could easily become a starveling. The animals, the plants, the biomes, are entirely unrepeatable."(3)

Scientifically, the heated controversies regarding the management of redwood forests attest to our inconclusive knowledge of them. Erosion, the same process which contributed to the Rockefellar Forest disaster, is a common foe in redwood forests. The clearcutting process compounds the problem by removing all vegetative cover. The natural erosion rate is usually drastically accelerated, inflicting great damage on the logging site and the stream. More research is needed by watershed experts to discover the least disruptive and harmful logging techniques. We do know that detrimental consequences of indiscriminate timber harvesting operations are transplanted eventually to the entire watershed. Research to end such harmful effects requires existence of a pristine watershed area as a standard. This need is expressed by the final report of National Science Foundation Grant #3468, conducted on the ecology of the coastal redwood forest:

"Watershed management research in the East, Oregon, and California has indicated in general that indiscriminate logging practices contribute the bulk of the sediment load to the streams. However, additional research within the Redwood Region is needed locally to identify more specifically what logging conditions do cause the measured excessive sediment load. For valid scientific comparisons, sediment load data from undisturbed watersheds are needed to determine directly the so called natural or geological erosion rates and the major factors affecting it. Large pristine watersheds are no longer available within the lower and middle drainage of Redwood Creek. The last remaining watershed of any size is Emerald Creek. With the loss of pristine watersheds for research, the opportunity of measuring directly the actual geologic erosion rates may be forever lost." (4)

Therefore, Emerald Creek watershed is considered "highly critical from the viewpoint of preservation of the southern portion of the park." (5) Its unstable geology and its upslope position relative to the parklands makes it highly important to preserve and include it in the Redwood National Park. If clearcut, it would become a source of heavy erosion and increasing sedimentation, adversely affecting park values all along Redwood Creek.

VIRGIN FOREST PROFILE




DOUGLAS FIR

HARDWOODS

500+ YRS
VIRGIN FOREST

REDWOOD

GRAND FIR

The addition of Emerald Creek would add to the variety of the Redwood National Park. The park would also acquire its first natural prairies. Indian tribes maintained these prairies and had villages here; it would be of great historical interest to have them under Park protection. The vegetation in this one watershed ranges from the finest old growth redwoods, to old growth Douglas-fir, and hardwoods such as madrone and tanoak on the upperslopes.

The variety of the vegetation is equalled by its impressive size. Preliminary measurements indicate the existence of numerous near-record redwoods, and possible record tall trees for the Douglas-fir, western hemlock, madrone and tanoak species.

The importance of saving these huge trees was stressed by a team appointed by the Directors of the American Forests Association. In their report on "Redwood Parks in Humboldt and Del Norte Counties" they stated:

> "The tall trees located in the course of the National Park Services study deserve, perhaps demand, permanent protection as the tallest living things in the world. . .such action should be taken promptly, irrespective of whatever recommendations the National Park Service may eventually make in respect to the establishment of the National Park." (6)

How does one translate the integrated, sensual and spiritual experience of redwood wilderness? The aesthetic experience of redwoods is not easily conveyed. If you were able to temporarily reroot yourself in Emerald Creek, there would be little doubt about your own recognition of the area's intrinsic value. However, even if you and others are unable to avail yourselves of this singular opportunity, it should not be denied to others, including those yet unborn.

## COMMITTEE TO SAVE EMERALD CREEK

The Committee to Save Emerald Creek has been formed by a group of citizens who consider it imperative to include Emerald Creek in the Redwood National Park. We feel that this area's unique and irretrievable qualities demand its preservation in the National Park System. Logging has already begun in the upper slopes of the watershed. Arcata Redwood Company, which owns the predominant part of the watershed, has filed with the State Forestry Division its intention to clearcut all holdings. There is little time for action and less time for speech.

In creating the Park, Congress authorized the Park Service to purchase up to 4000 additional acres for protection of the already preserved acres; this was never done.

Those who are concerned about the future of Redwood National Park should write letters to the National Park Service, Washington, D.C., and to legislators, expressing their concern for Emerald Creek.

Pending action by the Park Service, it is vital that a moratorium on logging in this area be imposed by Congress. Again, we must write letters to our legislators in Washington, asking them to sponsor and/or support such legislation.

We are preparing a half-hour color film on the Emerald Creek watershed, which will hopefully be shown on national television. Only public interest and support can save Emerald Creek. The Emerald Creek Fund is a registered non-profit organization. Finan-

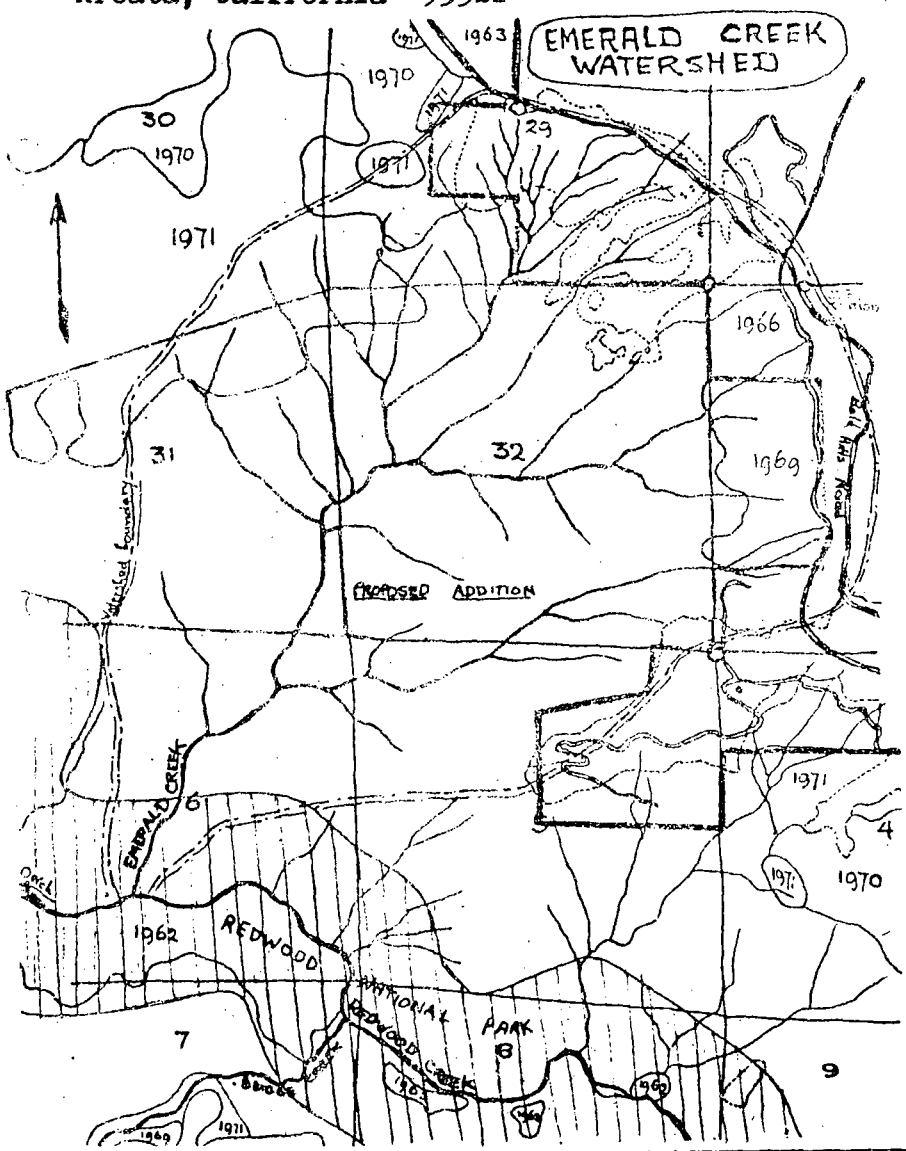
cial contributions are essential for the success of this drive. Tax deductible contributions of any size can be made to:

Emerald Creek Fund
c/o Redwood Research Institute
P.O.Box 59
Arcata, California 95521

Any contributions beyond the cost of the film will be donated to the National Park Service for the purchase of acreage in Emerald Creek watershed.

Those with specific questions or desiring more information should address correspondence to:

Emerald Creek Committee
c/o John Amodio
Natural Resources 214
California State University, Humboldt
Arcata, California 95521



EMERALD CREEK WATERSHED
Orick, California

Location: T9NR2E parts of section 5 and 6
T10NR2E parts of sections 28,29,30,31,32 & 33
The area is adjacent to Redwood National Park.

Ownership: Arcata Redwood Company 1563 acres
Simpson Timber Company 263 acres

Some 431 acres have already been clear-cut prior to 1972. There are 207 acres in prairie, 427 acres in old growth douglas fir forests, and 762 acres in old growth redwood forests. Some 70 acres are already included in the Redwood National Park.

The total estimated full cash value of the land is $2,600,000.00, according to the Humboldt County Tax Assessor's Office (information as of Jan. 8, 1973). The tax rate is 8.855/$100 assessed value, and the assessed value is 25% of the total full cash value.

Ecology: The watershed is of the dendritic type. Parent Materials are metamorphic rocks with active faulting and slumping of the soil mantle, The main creek is about 2 miles long, often cutting through rock layers, forming canyons and rapids. The upper watershed at 2300-2500 feet elevation is a natural prairie with oakgroves fringed with young growth douglas fir and hardwoods. Soils range from Atwell to Wilder soil series. The upper slopes and ridges are in mixed old growth douglas fir and hardwoods with some redwoods. The soils are mostly Hugo, Orick and Masterson. The lower slopes are in prime virgin redwood forest. Soils are unstable with a concave topography, mostly Hugo and Orick.

These forests are among the most unique in the world. Some of the world's tallest trees have been found in this watershed.

| Location | Owner | Tax Code | Acreage | Forest Type | Total Cash Value |
|---|---|---|---|---|---|
| T10NR2E | | | | | |
| Sect 28 | Simpson | | 28 | Prairie | 2,800 |
| Sect 29 | Simpson | 532-072-02 | 13 | clearcut DF 1970 | 1,310 * |
| Si | Simpson | 532-072-05 | 125 | prairie | 65,390 * |
| | Arco | 532-072-01 | 45 | D3 | 95,000 |
| | | | 41 | R4,D4 logged 1971 | |
| | | | 39 | D3,D4 logged 1971 | 4,000 |
| | | | 67 | D4, logged 1971 | |
| Sect 30 | ARCO | 532-071-01 | 45 | R4 logged 1971 | 7,500 |
| Sect 31 | ARCO | 532-076-01 | 191 | R4, R5 | |
| | | | 101 | R4, R5 logged 1971 | 570,000 |
| Sect 32 | ARCO | 532-075-01 | 231 | R4, R5 | |
| | | | 45 | prairie | 1,123,380 |
| | | | 322 | D3, D4 | |
| Sect 33 | ARCO | 532-074-04 | 101 | D4, D2 logged 1969 | 7,050 * |
| | Simpson | 532-074-01 | 54 | D4, logged 1966 | 1,280 * |
| | | | 34 | D4 | 108,800 |
| T9NR2E | | | | | |
| Sect 6 | ARCO | 532-061-01 | 206 | R4, R5 | 508,810 * |
| Sect 5 | ARCO | 532-062-01 | 93 | R4, R5 | 61,000 |
| | | | 26 | D4, prairie | |
| | Simpson | 532-062-02 | 9 | prairie | 900 |
| | | TOTAL: | 1826 acres | | $2,557,220 |
| | | | | | rounded to $2.6 million |

* Exact cash values as recorded by the Timber Assessor , Humboldt County (Jan. 8, 1973). The other values are prorated.

R5 - old growth, 200+ ft R4 - old growth, 100-200 ft.
D4 - old growth, 100+ years D3 - second growth, large
D2 - Second growth, less than 100 ft, 40+ years of age

# BIBLIOGRAPHY

(1) Stone and Associates. April 1969. Redwood National Park. Prepared for the National Park Service by a vegetation management firm.

(2) Becking,Rudolf W. January 1967. The Ecology of the Coastal Redwood Forest and the Impact of the 1964 Floods upon Redwood Vegetation. Final report to the National Science Foundation. NSF GB #3468.

(3) Ward, Barbara, and Rene Dubos. 1972. Only One Earth: the care and maintenance of a small planet. An unofficial report to the United Nations Conference on the Human Environment.

(4) Becking, op. cit.

(5) Stone and Associates stated that "clearcutting on slopes of over forty percent on Josephine soil is highly hazardous." Arcata Redwood Company is currently conducting such practices on the upper Emerald Creek watershed.

(6) Davis, Samuel, and Kenneth Pomeroy. 1965. Redwood Parks in Humboldt and Del Norte Counties. Report to the directors of the American Forestry Association.

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Emerald Creek Fund
c/o Redwood Research Institute
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