

NATIONAL PARKS & *Conservation Magazine*

The Environmental Journal

February 1972



ALASKAN PIPELINE

BY THE TIME these words appear in print, a revised Impact Statement on the proposed Trans-Alaska Pipeline may have been made public by the Department of the Interior. A year will have elapsed since issuance of the first draft Impact Statement, which was the subject of departmental hearings on short notice last February.

It will be recalled that the NPCA and the Environmental Coalition for North America (Encona), as well as many other environmental organizations, testified against issuance of a pipeline permit on the basis of the very unsatisfactory draft Statement. Interior Secretary Morton was prompt to announce that a thorough re-examination of the proposal and the Statement would be made, and we and other environmentalists then stepped back to await the results.

A LARGE RESEARCH STAFF was appointed in the U.S. Geological Survey to participate in the re-examination. Representatives of the oil industry and promoters of the pipeline were drawn into the replanning and re-evaluation to a very large extent. No effective two-way channels of communication were ever established with the environmental movement as a whole.

As a consequence of the way the matter has been handled, and on general principles, it will be vitally important that non-profit public-interest organizations be given an opportunity to study the new Impact Statement carefully, and to criticize, support, or oppose it, depending on its merits or demerits.

Further public hearings are essential in the national interest. The hearings should be held by the Council on Environmental Quality. The CEQ has the authority, and has indicated its intention to do so in important cases; no case could be more important than that of the Trans-Alaska Pipeline.

WE STRESS that adequate advance notice will be essential. There have been unpleasant rumors to the effect that the revised Impact Statement would be submitted, to be followed immediately by issuance of a permit. We find it hard to believe that such procedures are contemplated; they would be highly reprehensible. The customary

90 day notice, at the very least, which is given to agencies and states in such matters, should be accorded to the public for participation in the pipeline hearings.

The NPCA, Encona, and other concerned organizations have restrained their public comments during the review period. We shall be interested, however, in learning how it may be possible for any revised Statement to answer many of the basic questions we raised in the hearings a year ago.

THE INHERENT environmental dangers of the proposed route are so great that it is difficult to see how they can be overcome. They include, among many others, the inevitable thawing of the tundra and permafrost with consequent breaks in the line; the interruption of caribou migrations and the destruction of the caribou-wolf ecosystem; the grave dangers of serious earthquakes in the southern two-thirds of the route, particularly the Alaskan Range, with pipeline breaks which it would be impossible to prevent; the admitted inevitability of deep and widespread environmental degradation of the marine environment at Valdez, where the pipeline will end and loading onto tankers will take place; and the statistical inevitability of the eventual loss of some of the tankers on their perilous journey from Valdez to Seattle and other West Coast ports.

WE SHALL WISH to have a hard look at any comments in the revised Statement about alternative routes. A number of alternatives are available which will not involve loading to tankers and shipment down the Coast. We shall be curious as to the justification for the gigantic ships which are apparently proposed. It has been said with good reason that each of these vessels is a potential catastrophe in itself.

And we shall be interested also in the question of markets. The great urgency which is attached to the pipeline by its promoters has been said to hang around national defense. We had to get out of the Middle East and back home, back to Alaska. Some people noted the military vulnerability of the pipeline. But the rumor persists, and it has not

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COVER *Grizzly, by Fred E. Mang, Jr., National Park Service*

The great grizzly bear of our American West, once lord of his primeval domain, has long been a main attraction for visitors to Yellowstone National Park; but generations of grizzlies have been reduced to garbage scavengers by man's desire for amusement. Now the National Park Service, in an effort to reestablish a natural population of bears living natural lives with minimum interference from humans, has begun a controversial program that may help restore this great beast to its rightful place in nature. (See page 10.)

National Parks & Conservation Association, established in 1919 by Stephen Mather, the first Director of the National Park Service, is an independent, private, nonprofit, public service organization, educational and scientific in character. Its responsibilities relate primarily to protecting the national parks and monuments of America, in which it endeavors to cooperate with the National Park Service while functioning as a constructive critic, and to protecting and restoring the whole environment. Life memberships are \$500. Annual membership dues, including subscription to National Parks & Conservation Magazine, are: \$100 sustaining, \$50 supporting, \$15 contributing, and \$10 associate. Student memberships are \$8. Single copies are \$1. Contributions and bequests are needed to carry on our work. Dues in excess of \$10 and contributions are deductible from federal taxable income, and gifts and bequests are deductible for federal gift and estate tax purposes. Mail membership dues, correspondence concerning subscriptions or changes of address, and postmaster notices or undeliverable copies to Association headquarters in Washington. When changing address, please allow six weeks' advance notice and include old address (send address label from latest issue) along with new address. Advertising rates and circulation data are available on request from the Advertising Manager in Washington.

Yellowstone Diary

Marian Elizabeth Throop



Myriad words will be printed this year about the beauties and natural wonders of Yellowstone, our first national park. It seems fitting that a portion at least of this homage to the great park and the park idea should be devoted to the impressions and experiences of earlier visitors.

Marian Elizabeth Throop, now living in Gridley, California, under her married name, Mrs. Elfie Hanson, lived in her youth near Marshall, Minnesota. Her parents, worried about Marian's frail health, had sent her to visit her eldest sister Margaret, who lived with her husband Lige Loomis and their sons near Powell, Wyoming. Other relatives mentioned in this account were Loomises who also had migrated from Minnesota to Wyoming in the early 1900's. During their trip by wagon through Yellowstone National Park in 1914, Marian, just turned 20, kept this diary for her mother back home in Minnesota.

Wednesday evening, August 18, 1914, Powell, Wyoming

Our long-talked-of and joyfully anticipated Park trip is at hand! Glory be! I was about to despair until today we discovered that it was no longer a vague anticipation but a realization. I helped Lige all afternoon up at Grandpa's to get our two wagons in repair. We both worked hard, and with Grandpa's and Vera's able assistance we left them complete, even unto details. We will have to get up early tomorrow so as to pack our truck in, and then we will go on our way rejoicing.

There will be in our party: Margaret, Lige, the boys, Aunt Orra, Alta, and myself. Aunt Orra is going to drive our wagon, and Alta and I will ride with her. Alta and I are planning great plans regarding the soldiers. The previous parties all have sent such wonderful tales of the delightful soldier boys, and—just wait!

It's only 8 o'clock, but I'm going to bed, for I didn't get home from the party last night 'til midnight, and I must be up early tomorrow morning.

Thursday night, August 19, Cody, Wyoming

After a long day we have arrived at our first destination.

Had a bully good supper, and we all ate like grubbers. Think it is going to be pretty hard work, but believe the trip will be worth it. Now I've got to quit, for the gnats are eating me furiously.

How the old Shoshone does roar! A charmingly soothing lullaby indeed. Red Butte is only dim tonight but will be wonderful, no doubt, in the morning.

Friday a.m., August 20

Well, Alta, Lige, and I have just got back from Cody. We went up town after some junk and went through the Irma Hotel, where we saw those wonderful pictures. One cost \$20,000 and is magnificent! We went through the bar room and saw the buffalo and calf mounted.

Now must help get the teams ready and once more resume our journey through parts unknown.

Noon

So far I have not described our camp wagons at all. We have two regular "Gypsy" wagons, top and all. On the back of one we have our grub box. It is as high as the top of the bows and the cover lets down for a table. It has a hinged leg that holds the unattached end. The table is large enough so that all seven of us sit around it very comfortably. There are at least five wide shelves in the cupboard. We carry the stove on the back of the other wagon. It is sheet iron and new, and altogether splendid.

We started at 8:00 a.m. from Cody Bridge, where we had camped, and drove up through the Canyon. I rode Topsey on ahead—played scout—for the roads are so narrow and wind in and out so that you can see but a little way ahead. I stopped two automobiles and three wagons for our rig, and once one auto came so close to Topsey that she reared and almost dumped me down to the river hundreds of feet below. A man jumped out and led her past their car, for she was so frightened I couldn't do a thing with the hard-bitten little mutt.

The scenery was stupendous! Words cannot express the grandeur of it all. Mountains reach almost to the clouds on either side of us, and the rushing, roaring Shoshone so

many feet below—and we following that rough, ugly little trail out there on the ragged edge of despair! It was all thrilling to say the least, and while my heart did miss a couple of beats once in awhile, I surely did enjoy it even unto the uttermost.

For me who never before saw a hill more than 6 feet high, it was entirely a new experience. We stopped down by the big dam for 30 minutes, then drove on 4 miles farther, where we camped for dinner. Now we are ready to go on. Alta and I take turns riding Topsey. I rode 6 miles yesterday and 8 today. I forgot to say that we went through six tunnels in the forenoon.

Friday night

Well, here we are in camp for the night. The most beautiful spot imaginable, too. Just beside the Shoshone, on the right, and Thousand Foot Cliff on the left. Alta and I are down on the rocks by the river writing while Margaret and Aunt Orra get supper. We divided up the work among us so no one has too much to do. Alta and I take care of one team, fix our own bed, and wash all the dishes.

Such magnificent sights as we have seen this p.m. The rocks are immense and are thrown about in such odd shapes and sizes. Nearly every one resembles something else—an animal or a building—and is named for it. We passed The Camel, Punch and Judy, The Saddle, and The Old Man of the Mountains. The latter is a queer sight. A great rock a thousand feet high has almost a perfect face. It reminds me of the Sphinx, only more wonderful because of its being natural. Then right across the river from us is The Sentinel. He stands up there so far above us, leaning against his castle. His arms are folded before him and he wears an old army cap. He is indeed well named.

Already we have traveled roads that make the Canyon road look tame. I rode Topsey 14 miles today and am feeling a trifle weary and so, so hungry. I'm beginning to feel so insignificant! Sort of like: "Great, wide, beautiful, wonderful world—with your wondrous waters around you curled." Exit!

Saturday night, August 21, up in the Sylvan Pass

Such a wonderful day! We came about 30 miles today and now are really in the Park. Such sights today we've seen as I had never dreamed of. Tonight here in Sylvan Pass we are right in the heart of the old Rockies. We passed Chimney Rock today. It looks just like an old-fashioned log house with a stone chimney built up on the outside—only coming toward it we could see light between the chimney and the house. We passed right beneath it and couldn't help but hold our breath at the thought of its coming thundering down onto us, and it seemed as though it would take so little—even a breath—to tip it. We got to Pahaska Lodge (Buffalo Bill's swell summer resort) at 3:30 p.m., and guess that is some aristocratic place. It is just at the entrance of the Park, and people are brought there in the white steamers from Cody and take the coaches from there around the Park. It is right in the middle of a wonderful pine forest and is charming.

We developed great appetites coming up through the spruce and pine woods. I'm rather short of breath, though, up here. The altitude is increasing. We saw our first bear tonight. That is, some of the bunch did. He took a hike, but we expect him back tonight.

The mountain streams are so beautiful! Some start from springs and some from the snow caps. They come trickling down sometimes as meek and lowly as can be, then again they will come dashing out across the road at travelers with a rush and roar that is almost appalling. One had worn a path clear the whole length of a fallen tree, and the water came out so clear and sweet. Alta and I took a drink of it and filled our water bag for future reference.

It's pretty chilly tonight. It is only 6 o'clock, but the sun has left us. We must be on our way early in the morning, and brrrr! How I dread the thought of crawling out of those charming blankets.

Monday, August 23

Didn't write a scratch yesterday for the day was so tremendously taken up. We hadn't meant to travel a bit on Sunday, but we had lost considerable time and were so anxious to make the Lake Hotel for Sunday. We drove hard from 7:30 a.m. until 7:30 p.m. and made 21 miles. I rode horseback all the way, too. It was up hill all the way, and some of us were about all in but our shoe strings! The morning was grand and it was all wonderful. We crossed the bridge that we have to go under to get over. They say that no rattle snake can go farther than Sylvan Pass for it would break his back getting through it.

We camped near some men who had crossed the Big Horn Mountains and were going through the Park. They had three grown burros and one colt 45 days old, and they had come over 300 miles and all on foot! Alta had Ray's camera and got some pictures of them.

My, how hungry we were when we got into camp. I say that every time, but it does seem so important. After dinner we took basins and all picked strawberries for supper. Got a great plenty for supper and for dinner Monday. Then we put on our best "bib and tucker" and went 2 miles to the Hotel. We saw nine bears. Two were cubs and such fat slobs they were. Then we went through the Hotel. That sure was scrumptious. On we went then to Wylie Camp, where they had a short religious program. A choir sang several hymns, and a young lady gave us a beautiful solo. Then Governor Frye of Utah spoke, and also a minister from Chicago. Everybody got a sack of hot buttered pop-corn, too. The program took place out in front of the 53 tents—around a big campfire that lit up everything for some distance. They had seats all around for the convenience of the guests. There are three different companies who take tourists through the Park. There is the Tex Holm, or the Hotel Route; and the Wylie way; and the Frost & Rickards. O, yes, and the Shaw & Powell way too. The Wylie's give impromptu programs every night, and we intend to take some of them in.

Tuesday noon, August 24, Grand Canyon

We pulled up here at 5:30 last night. We really began to see things last night that make you sit up and take notice. We left Lake Junction at 1:00. That is, the bunch did, but I rode up to the Hotel on Topsey to get the mail and some post cards. A nice looking soldier boy rode back with me, about 6 miles in fact, before we overtook my relatives. Quite interesting, to say the least. We came to Mud Volcano about 2:30 and of all the horrible sights imaginable, that is the worst. They are not describable, at least I'm not equal to it, but I shall make a feeble attempt to impart a trifle of the horror of it to these pages. There is a great crater-like hole in

the side of the mountain from which continually rises clouds of greyish-white steam that can be seen for miles. Of course there is a railing, so we could only go so close to it, but we got the view all right. The roaring is terrible. We had to scream at one another to be heard at all. It boils and gurgles and splashes incessantly, and about every fourth gush is louder and more terrible than the rest. It doesn't come straight up, but apparently from a cave in the side of the crater. As to color: it is a grayish green and in the boiling process just bubbles all the time, and the waters toward the outer edge are just like wrinkles. The larger crater is probably 20 feet across and so hideous! We stayed only a few minutes, for it seemed to get on the nerves of all of us. They told us that a man fell in there last summer and was swallowed in one gulp. I don't know how true the report is, but the thought of such a fate is enough to chill one to the marrow.

Well, we came on to Hayden's Valley. That's where they usually see the elk and deer, but we didn't get a single glimpse of one. The road on from there along the Yellowstone River is beautiful. We enjoyed it so much. We camped at 5:30 just at the head of Upper Falls. It is a fall of 109 feet and very pretty. On the way back to camp we saw three deer, and Alta tried to get a picture of them but they got away. After supper we took a tramp across to Wylie Camp and enjoyed their program and campfire. Got home and slept soundly as usual. This a.m. took the trip down to Lower Falls. That is a fall of 308 feet and prettier than the other one, but the climb up is terrific. A stairs is built down from the road to the bottom of the Falls, and there are about 500 steps in all. Then we walked on to Point Lookout and then to Grand View. I had to stop there while the rest went on, for I was so nearly "all in." I got a ride back to camp, and Alta and I are getting dinner for the rest, who went on to Inspiration Point. I expect I missed a wonderful sight, but I could go no farther, for the altitude is getting pretty steep for me. My throat bleeds all the time, and I can't help swallowing it, which makes me a little squeamish. Lots of people have trouble with their ears bleeding too. We are up about 7,765 feet.

Wednesday, 4:30, August 25, Lower Falls

Alta and I are out in the middle of Lower Creek on some whoppin' big rocks. Am tired and sleepy tonight and intend to retire early.

Must resume my tale from where I left it yesterday at noon. I believe I was bemoaning the fact that I had missed Inspiration Point and Artist's Point. Well, I need not have despaired, for I did, much to my great joy, get to see them and a whole lot beside. We were in camp for over 24 hours there at Grand Canyon, and right across from our camp was another. A couple of young men. Alta and I had talked to them several times, for they appeared interesting. Well, they came and asked us girls to go out for the p.m. with them. We didn't think that we'd dare to go without a chaperon, but finally Aunt Orra said we could go without one. They were some swell, too! Both were Stanford University Grads and evidently wealthy, for they both wore diamonds. They were cousins too. Well, we went and had a splendid time. Inspiration Point was beautiful, Point Lookout is pretty, but give me Artist's Point! The Canyon stretches out for 20 miles in the most beautiful colors imaginable. Either side looms up hundreds of feet from the river bottom, and 3 miles from the Falls the banks are

colored in all the shades of the rainbow from the sulphur deposits. We got to Camp Wylie about 5:30; and Mr. Swanstrum, the one I was with, got five boxes of marshmallows, and after supper they came over and we toasted the marshmallows. Great sport!

We left early this a.m. and climbed Mt. Washburn. Altitude 10,388 feet. It is the next-to-the-highest peak in the Park, and very few people attempt it. We had dinner there, and on our way up here we saw a couple of antelopes. They are surely pretty.

Now Alta wants my pencil to write in her book, so will have to quit for tonight. The boys are fishing, and we anticipate a fry for supper.

Friday night, August 27

Have neglected my book considerably the last couple of days and now must get busy to make up for lost time. We camped all forenoon and until 2:30 p.m. at Lower Falls, Thursday. While there the boys fished and got a mess of salmon trout for dinner. We girls did a big washing down on the river bank, and our clothes really looked pretty respectable.

We resumed our journey, and the first things we came to were the petrified trees. They were very interesting. Just two of them, about 2 feet through, and the trunks were standing about 15 feet. It had been dug out around them so we could see the roots and know them to be the real thing. Next we saw a beaver dam and several beavers at work. They had cut down trees 6 and 8 inches through.

We passed under Over Hanging Cliff over a road





Marian (in dark sweater) and Alta.

Left, route of wagon trip through Yellowstone National Park in 1914. Below left, the road up Mt. Washburn in 1913. Below, boiling mud in Yellowstone National Park. Bottom, steaming terraces at Mammoth Hot Springs.



Above, a deer crosses the road in front of our wagon. The other wagon is in the distance. Below, Lower Falls in the Grand Canyon of the Yellowstone from Artist's Point.

GEORGE A. GRANT, NATIONAL PARK SERVICE



hundreds of feet from the river bottom just below us and only wide enough for one team to travel. We passed Needle Rock, a rock described perfectly in our guide book as: "A long slender spire that starts at the river's edge, and mounts up 300 feet." We went through Lost Creek Canyon and down within 5 miles of Mammoth Hot Springs. On the past 3 miles of our drive down the Deer-tail Divide, the smoke from the forest fires was awfully thick. We camped with two other parties on the banks of Lava Creek. We pulled out early this morning, and after an hour's drive came to Mammoth Hot Springs. They certainly were grand. The Springs are formed in terraces and each one is named. There are Cleopatra, Highland Terrace, and Pulpit Terrace; and the grandest of all was Minerva Terrace. We were not allowed where we pleased but kept in the narrowest of paths. Even they sounded hollow so that we were almost afraid to step ahead. We saw Liberty Cap, the Devil's Kitchen, and more hot springs down in a cave. Just across from the terraces is Yellowstone Military Quarters. Alta and I "picked up" a few trinkets in a curio store there. We had dinner out a mile and a half from Mammoth. We started out at 1:30 and made 17 miles. We passed Silver Gate, a beautiful natural gate-way of gray rocks. Then came the Hoodoos. They were the strangest formations of all. The guide book says that the Hoodoos were at one time all one mountain and had been thrown out at some immense upheaval. There were scores of those great boulders—looked almost like a city of them! Then came Golden Gate, similar to Silver Gate except in color, which was bright yellow. Next came Swan Lake. There we saw an elk. We passed Obsidian Cliff shortly. That is one of the Park's wonders. It's a great old crag of black glass. It is the only one in the world and so hard that when they tried to blast it as they were putting the road along there, they found it impossible to do so. So they heated it to a white heat and ran ice-cold water over the surface they wanted to use. That served, and we found a good hard road.

A mile or so farther on was Roaring Mountain. Its description is quite complete. It is believed to be of volcanic formation—something quite new! It has almost entirely developed in the last 10 years and is growing rapidly.

Now we are in camp down near Norris Geyser Basin. We picked a pan of blue-berries for a pie. I forgot to say that on our way to Mammoth this morning we saw two monstrous buffaloes. They almost gave me nervous prostration, and we beat it down the road!

Saturday noon, August 28, Norris Basin

Have ridden horse back all a.m. (11 and 1/7 miles). Am tired, but had such a good time. I rode down to the Soldiers' Station to register for our bunch, which has to be done at each station. I guess I almost shocked them to death too, for I insisted on them bringing the book out to me to register, instead of dismounting and going in. The soldiers all looked so wild. First they said "no," I would have to come in, but after a deal of persuasion they condescended to "bring the mountains to Mohammed." Quite funny. There were five of them and all nifty and interesting to me!

We came on the Norris Basin and saw several geysers, some in action. The Black Growler is there and was terrible. It can be heard for 3 miles around. It roars so desperately. It was not in action but kept up that continual rumble and roar with steam pouring out in clouds just as some giant

engine will pound and thump and roar with the steam escaping. We had to go through clouds of steam so dense that we could scarcely see the board walk ahead of us, and to step off meant—well, perhaps the end of a perfect day! We came on then, and I rode 5 or 6 miles with a young medical student from Montana. He sure was some classy, and so was the horse he rode; but for ugliness, nothing can beat my little "yaller hoss." The doctor is going to leave a preparation at Fountain Hotel for my nose, which is all peeling! We stopped a couple of miles from camp and picked enough raspberries for dinner.

Sunday, August 29

Am way behind again in this "account" book o' mine, and I must make haste to relate a "few." I rode in the wagon Saturday afternoon and had a stupid time. The roads were not sprinkled for several miles, and the dust was something fierce. We came to Lower Geyser Basin about 4:30 and the Fountain Hotel. We saw the Great Fountain geyser and several other interesting ones, but none of note. Just one played during our stop there, and I can't recall its name. We came on 3 miles then and camped for the night. Alta and I washed all our clothes again. Our camp was not more than 6 rods from Fire Hole River, where the waters are hot all the time. The steam from the geysers poured over us all night, so that this a.m. our clothes were all damp. Alta and I put on our bath robes and went into one of the pools near one of the geysers and bathed. My! The water was so hot! And just as we got out, here came a party of fifty or sixty tourists and two soldiers. Bathing in any one of the geysers or pools is strictly forbidden, so Alta and I beat it at high speed.

We resumed our traveling, even though it was Sunday, and made Old Faithful at 11:30. Had dinner and saw River Side geyser play. It spouts 30 minutes every 5 or 6 hours. It goes some 200 feet high; and tonight at 5:30 when it played, the sun struck it just right, so we saw the most beautiful rainbow imaginable. We are going to Old Faithful Inn after supper to see its name sake's geyser. The search light is turned on it every night and it spouts every 73 minutes. Must not neglect mentioning two of the sights we saw this morning: Prismatic Lake and Turquoise Springs. They were so pretty in the sunshine. We also saw the Grotto geyser this a.m. in action.

Monday a.m., August 30

We started out and had the good luck to see The Castle in action. We stopped at the curio store and looked at all the beautiful things stored there. Then on to Lone Star geyser, a side trip of a mile and a half, and got there just before dinner. I really believe that was the most beautiful geyser of all. The formation around its crater was about 10 feet high and 6 feet in diameter. We got there just as it began to play, and the sight was one of the finest. It plays every 40 minutes and throws its boiling water 60 feet high.

We made a long drive over the Continental Divide that p.m. up 8,345 feet high. When we got back to camp, cold and tired, here came another wagon, and much to our surprise out piled friends of ours who had come in on the opposite end of the "Loop" so as to be sure to meet us, and so we met "sure nuff" on the banks of the great Yellowstone Lake. Alta and I had already gotten acquainted with some of the soldiers at the station, and so they asked us and Myrtle to go up to the Hotel after supper. We went and had



Old Faithful Inn and Old Faithful Geyser.

a foxie time, and I ate so much candy I got sick and had to feed the fishes all night. We all sat around a monstrous camp fire after we got back from the Hotel, and the soldier boys entertained us right royally. One of them asked me to go out on patrol at 8:00 a.m. the next day, and Lige said I could go; but I couldn't after all, for my little soldier boy had a scrap with his Corporal and couldn't go on patrol himself. The funny part of it was that they scrapped because the little soldier boy "butted in" while the Corporal was trying to make a date with me—and I liked his looks so awfully well, don't you know.

Then the next a.m. three of the soldiers—the same ones—took us three girls out for a ride on Yellowstone Lake. We went about 16 miles. Came back, and I asked the Corporal to shine my shoes, which he did, and which I considered very sweet of him. He also rode most of the way to the Lake Hotel with me that p.m. Alta and I rode 15 miles that afternoon on some horses that our guide at Old Faithful brought us. I was awfully tired when we got to Lake Hotel, and shortly after getting into camp, what was my surprise and delight to find my little soldier boy come to see me. He came across the lake and found out at the soldier's station where our camp was. He spent the evening, and part of the night, and I was so sleepy and everybody had deserted. Well, when he left, he left his U.S. pin for me to wear! I wear it constantly, of course. Quite romantic—not?

Wednesday evening, September 1

It's a good thing we are nearly back to Powell, for I am getting so negligent about my diary. I think soon I'll be quitting altogether.

Was just about to go up to Old Faithful Sunday evening when I left off scribbling, so will resume from there. We did go up to the Inn, Alta and I on horseback. We borrowed a saddle and Alta rode "Ted." We met a young man there that we had gotten acquainted with on the trip, and he took us all through the Inn. It has the reputation of being the most unique thing of its kind in the world. It is an old-fashioned-appearing building, constructed entirely of logs, even inside. We went up on top, from where they operate the

search lights and watched them illuminate Old Faithful geyser.

We came down the Sylvan Pass today. The road was not very interesting as we had been over it before. I saw a funny little sight at Lake Hotel the other night. The bears were out in full force, and a lady tourist was so desperately in love with them. She fed them crackers and junk for awhile and finally took a cracker between her teeth and let a great lumbering black fellow reach up and take it in his mouth. Of course one of her friends had a camera and snapped them at the desired time. But the funny part of it was that she couldn't shake him. She went for a walk with her sweetheart; and whichever way they turned, there was the bear, and finally they beat it for the Hotel, for she said it got on her nerves to be stalked by a bear.

Thursday evening, September 2

We are 22 miles west of Cody tonight with a prospect of a 2-day drive before we reach Powell. We passed Pahaska this a.m. and saw Mrs. William Cody (Mrs. Buffalo Bill). She is 73 years old and very pleasant.

Friday evening, September 3

Here we are at Folsom's. We got in at 4:00 p.m. and are going to have supper and stay all night here. Seems kind of good to be partly civilized again. Had such a weary day and am glad our trip is drawing to a close.

Saturday a.m., September 4

Ready to start now on our home stretch, and am greatly rejoiced.



The repeated references to "soldier boys" refer to cavalry troopers of the U.S. Army, first called into the young park during August 1886 to halt the destruction of its animals and the looting of its natural wonders. The troopers would remain in the park for yet two years beyond the time of the park visit recorded here, finally to be replaced by personnel of a newly created National Park Service. ■

MAN, GRIZZLY & NATIONAL PARKS



A. Stephen Johnson

A. STEPHEN JOHNSON

A new program may help restore an endangered great North American mammal to its rightful place in nature.

ON AUGUST 13 of 1967, in Glacier National Park, the National Park Service was faced with the effects of environmental pollution in a most brutal and deadly way. Two girls were killed by two different grizzlies on the same night in the back country of that spectacular park. Here was an undeniable effect, death, linked decisively with a cause, environmental pollution. In this case the pollution was not widespread, but specialized and localized. The pollutants in question were not exotic synthetics, produced by a technological America, but garbage, that ever-present evidence of man the world over.

As a seasonal ranger-naturalist in Grand Teton National Park during the summers of 1966, 1968, and 1969, I probably answered more questions on the "bear situation" than on any other single topic. This certainly was understandable, considering the flood of sensationalism that appeared in the mass media following the Glacier deaths. Any rational treatment of the bear situation, any attempt to place the matter in perspective for the public, was made almost impossible by the ill-conceived opinions, charges, and countercharges that emanated from every quarter. The uproar continued through the summer of 1968. Even today a human injury by a grizzly receives national attention, whereas deaths in the parks due to drowning, climbing, or automobile accident are rarely publicized.

I encountered person after person who was afraid even to drive through Yellowstone, with camping out of the question. In view of the emotional outburst of publicity the general conclusion that a grizzly lurked behind each tree waiting for a tourist is understandable.

As a ranger-naturalist my primary responsibility was interpretation of the ecology of the park, emphasizing the interrelationships of native plants and animals. Even though Grand Teton has few black bears and probably no grizzlies, its location 18 miles south of Yellowstone makes Grand Teton one of the main entrances to that huge park. Consequently I began to investigate the grizzly, hoping to bring some sense out of the confusion. In reading all available books, magazines, and newspaper articles on the subject, I began to wonder if they had been written about

The grizzly bear of the conterminous United States is an endangered mammal under the definition of the term developed by the National Parks and Conservation Association for a proposed international convention on endangered species of plants and animals. The definition is discussed on page 33 of this issue.

the same animal. The more I read, the more confused I became.

I read about an animal that is a killer but eats mostly vegetation; an animal that charges without warning but usually runs away; an animal that is solitary but often feeds in the company of other grizzlies; an animal that kills cattle but often is seen grazing in the field with them. And so it went, one contradiction after another.

The orientation I received each summer from the National Park Service was thorough and consisted of information on many species of wildlife—the coyote, bald eagle, elk, and trumpeter swan, to name several—but nothing on the grizzly. Personal inquiries referred me to the same books I had read. The Park Service made no other information available to its personnel as far as I could determine.

Next I began roaming the back-country of Yellowstone on days off with notebook and a camera equipped with a long lens. In Pelican Valley I saw deep-set tracks along a silt-laden bank; the hindquarters of a fawn with huge clawed tracks all around; a garbage-strewn camp left by a thoughtless person. I watched a young grizzly run back and forth in a criss-cross pattern along the sloping side of a grassy knoll snapping at the grasshoppers he thus stirred up.

In Hayden Valley I watched, from afar at first, flocks of black ravens and white gulls follow a garbage truck into a dump. I saw wide, paw-pounded trails, all radiating inward, like spokes on a broken wheel, from the distant tree-covered slopes to a gouged-out pit in the rolling sagebrush.

After the yellow garbage truck had growled its way in and out of the dump areas, I watched as grizzlies in singles, twos, threes, and fours made their way across the wide valley toward the dump, all coming in to feed on garbage. Most of the animals seemed to be either immature bears or females with cubs. In three hours I counted 23 bears, all grizzlies.

Even without the raw earth mounds that marked the position of the dump there was no difficulty in recognizing the purpose of the area. Large sections of plastic bags were strewn over a wide radius, lying tangled among the sagebrush and flowers. Paper, tin cans, cardboard—all contributed to the obscenity of a dump in the rare beauty that is Yellowstone Park.

In the droppings of bears great chunks of plastic and paper were intertwined, untouched by the animals' digestive processes. Plainly legible, and perhaps laughable in a way, was the slogan still visible on a butter wrapper: "It's Better With Butter. . ."

Looking through the lens, I saw that some bears were true "silvertips," with dark underfur showing through longer guardhairs, movement of muscles causing an undulating, rolling reflection of silver and black, or gold and dark brown. I remember being surprised by the many color patterns, the great beauty of the animals, their amazing quickness.

In a few hours of observation it became obvious that a definite hierarchy existed, as smaller bears moved to make way for sows with cubs. Each new arrival caused some change in the social scheme, with cubs often scampering to the top of the dirt mound, out of danger, until a newcomer found his "place." Occasional roaring and bawling was easily heard. From my position I could follow each bear as it left its place of rest to move toward the dump, often traveling at least a mile at a sort of shambling half-run.

During my observations and photography of the bears I was frequently quite close to them. With few exceptions they showed evidence of fear and ran from me at great speed. This was puzzling until I learned that much of the area in which I saw the bears was being used for research on the grizzly and that many of the bears had been immobilized and tagged a number of times.

One of the most striking characteristics of the grizzly is the extent to which it depends upon its sense of smell, which is truly phenomenal. Sight and hearing seem to play only a supporting role. The sound of the camera shutter, for example, always prompted a reaction, although usually a mild one. From a distance of as little as 50 feet I frequently watched the bears rear to their full height, look directly at me, then drop to all fours and resume feeding.

If suspicious, the grizzly would cast about with its head high, making "woofing" sounds and inhaling deeply, trying to catch my scent. Some bears would come across the sagebrush hills in a zig-zag pattern, sampling as wide an area as possible, especially on a day of little wind. Upon scenting me (sometimes from as far as 150 yards away) the effect was instantaneous and resulted in frantic, ground-tearing retreat. Other individuals, obviously aware of my presence, seemed unimpressed.

HISTORICALLY, the grizzly ranged through western North America from Mexico to the Arctic Circle, and from California to the western banks of the Mississippi River. In this primeval range the grizzly knew no enemies and was seldom hunted by any of the Indians who shared its huge domain. Early records of California indicate that some Indian tribes worshipped the grizzlies and that all went to great lengths to avoid the bears. The presence of grizzlies in a berry patch, for example, signaled the end of berry picking for the day. The California grizzly seems to have been at the biological summit of that former world.

By 1800 and the eve of the Lewis and Clark Expedition, the bear had encountered no real threats to its existence. Indeed, there is much to suggest that the grizzly was psychologically ill-equipped to cope with humans and saw little reason to step aside for the strange-smelling upright newcomer who began to appear on the west side of the Mississippi in the early 1800's.

In reading accounts of man's first encounters with the "white bear," it seems obvious that the bear had to learn to fear the human invader. From the first few years of exploration and exploitation of the American West come many accounts that tell of the frequency with which the grizzly allowed man to approach closely. At first most of the bears seemingly regarded the newcomers as simply another large mammal. The grizzly, generously endowed with curiosity, frequently attempted to move closer to the new animal but seldom was allowed to complete the inspection. Then, as today, a grizzly in its upright position was interpreted as being menacing and was shot immediately. The men of the Lewis and Clark Expedition were charged on many occasions by grizzlies, but only after the bears either had been wounded or had approached too closely.

The great bear met its match, however, in the relatively modern rifle of the late 1800's. Great size and plentiful numbers (perhaps as high as 1.5 million in 1800) made the



PHOTOGRAPHS BY A. STEPHEN JOHNSON



Left, one of two grizzly sows with three cubs. These cubs are about 1½ years old and are in their second (and last) summer with their mother. This trail was so well used that no grass grew anywhere along it. Right, a big sow, feeding, has two of her three cubs at her feet. The particles of food on her nose may help explain her inability to scent me from only 35 feet away.

big mammal an obvious target. The bear's inclination to fight back when injured or threatened won it the label "ferocious" and the scientific name of *Ursus horribilis*, or "horrible bear."

Tales of the grizzly, factual or otherwise, are now part of American folklore. Individual bears became legendary for their depredations, some even acquiring the label of "man-killer." Few records exist, authentic or otherwise, regarding the deaths of humans attacked by the animal without provocation. Most authenticated human injuries and deaths were connected with bear hunting or a female defending young. If the grizzly's performance as a man-killer had matched his reputation, the "Wild West" surely would not have been conquered so quickly, and California still might have some "Golden Bears" not in football uniform.

By the time the grizzly had learned to fear man and his rifle and to flee the approach of civilization, it was too late. The bear had acquired a reputation, and many people wanted to kill it merely for the challenge to vanity. Retreat into wilderness was futile. The grizzly had become the West's first status symbol, and manhood was conferred on those "brave" enough to kill it.

During the nineteenth century the bear was faced by an enemy even worse than the sport hunter. Into its shrinking habitat poured millions of cattle, bringing man into the most remote fastnesses of the West. Inevitably a few bears began to kill cattle, and equally inevitably there was massive retaliation by stockmen. Poison, traps, and trained dogs were used indiscriminately to reduce the grizzly's numbers. Again the grizzly's destructive capabilities had been grossly exaggerated as an excuse for wholesale killing.

The effectiveness of the cattleman's war on the grizzly may be deduced from the following dates of extinction, by state: North Dakota, 1870; California, 1922; Utah, 1923; Arizona, 1930; Oregon and New Mexico, 1931. Only in the states of Wyoming, Montana, and Idaho did the grizzly survive in any numbers by the close of the nineteenth century. Even the much-maligned rattlesnake has never suffered such a determined campaign of extermination.

Exactly 100 years ago Yellowstone, the world's first national park, was established in the northeastern corner of Wyoming. Even in the park, however, hunting was not actually halted until 1886; as of that year, the beleaguered grizzly finally had found a refuge. Or so it seemed.

FROM 1886 to 1918 Yellowstone was under protection of Army troops, a circumstance made necessary by large-scale poaching, especially of buffalo, in the remote park. The National Park Service, created in 1916, finally assumed full control of the park in 1918. Yellowstone had been steadily growing in popularity, and by the time the National Park Service took control many hotels and inns had been established to serve a rapidly increasing visitation.

Before 1930 most visitors arrived by train and stayed mostly at park lodgings, with few campers in evidence. By the mid-Twenties cars had become reliable enough to be trusted on a dirt road in the wilderness that was Yellowstone—and with the cars came floods of people.

The automobile had made Yellowstone financially accessible to middle-class America. Camping, as an inexpensive vacation, became more and more common in the park. As car travelers poured in, limited park facilities

were overwhelmed, and there was pressure for better roads, camping areas, stores, and other conveniences. With the human invasion also came problems of adequate sanitation facilities.

In those early days one of the easiest problems to "solve" was that of garbage disposal. All that was needed was to dump the garbage in a hole and let the bears, both black and grizzly, eat their fill. In this way most of the garbage was disposed of, the bears obviously liked the arrangement, and the practice was immensely popular with park visitors, who were able to watch the show. There seems to have been competition among park hotels and inns as to which could attract the most bears—and the most money from paying guests.

Soon the Park Service became enmeshed in the business of feeding bears, and it went to extremes in facilitating tourist viewing of the bears. Bleacher seats were built; lights were furnished; garbage was even sorted for the bears. One retired park employee recalls the distribution of edible garbage on "tables," that visitors might have a better view of the bears as they fed. Another common practice was purposeful placement of items like bacon, which usually provoked a battle between the bears. These and other anecdotes seem to indicate a real effort by the Park Service to please and entertain the visitor.

Yellowstone Park soon became famous for its bears,

both black and grizzly, and remains so to this day. Bears became synonymous with Yellowstone and were the main attraction of the park for many people. Visibility of the bears came to be accepted as desirable, even necessary, to the continued growth and prosperity of the park.

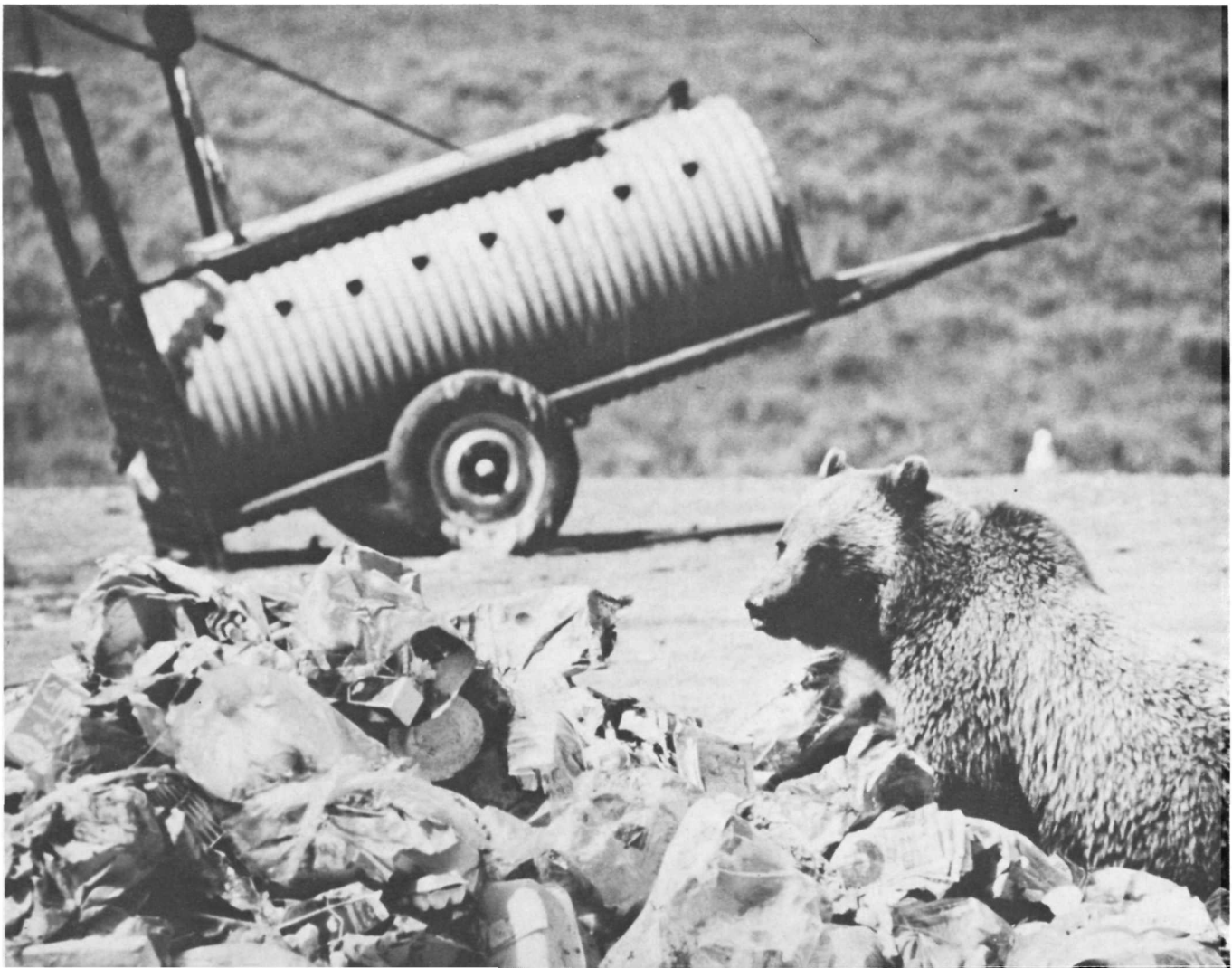
The old attitude of the Park Service toward the Yellowstone bear populations is well illustrated by these paragraphs from a popular Yellowstone guidebook of 1926:

And you surely ought to see the bears, there are about fifty grizzlies, almost all congregated about the hotels and camps where they find living easy at the garbage piles. At Old Faithful, Lake, Canyon and Mammoth there are established places for them.

Strangest of all, our bears are peaceable and will not harm you if you let them alone. Where bears are hunted they soon learn the range of modern rifles and how to avoid them; here, the same intelligence tells them they are safe and that it is much easier to eat at the "bear piles" than to forage for themselves. It has amazed everyone to see how quiet and peaceable the grizzlies have become; because in the days of Lewis and Clark, these big bears were thought to be very ferocious.

The National Park Service had to make the best of a bad situation. In attempting to cope with the flood of visitors brought by the automobile, mistakes were made. The national park concept was still evolving then and was, ecologically speaking, quite unsophisticated. This literally was a period of on-the-job training for the Park Service.

A large grizzly sow seems to contemplate the culvert trap in the background as she sits in the garbage she has grown to expect. The trap is used occasionally to trap unwary grizzlies but is used most often as a vehicle to transplant troublesome campground bears to remote areas of the park.





J. E. HAYNES, COURTESY OF THE NATIONAL PARK SERVICE

Human interference with the natural feeding habits of the Yellowstone bear population, both black and grizzly, is no new phenomenon. The practice has been going on for the past half-century, and only in recent years has the National Park Service taken steps to halt it.

While the grizzly was being fed and pampered, some of the other animals in the "safety" of the park were being slaughtered. The wolf, mountain lion, and coyote were "bad" animals, and were killed to protect the "good" animals—the deer and elk. Some 134 wolves and 121 mountain lions were killed in the early 1900's, and the coyote was "controlled" until 1935. M.P. Skinner's *Yellowstone Nature Book*, published in 1926, provides a view of earlier attitudes:

But it is the Mountain Lion that is the hardest to see. We haven't many, not more than 50, but they keep so well hidden we would not know they were here except for their tracks in the winter and the deer they kill. They are *the* deer slayers, and we find we must keep their number down if we would preserve any of the deer. So every fall after the tourists leave, certain of our more experienced Rangers are detailed to hunt mountain lions, wolves, and coyotes, although no hunting is done in summer for fear of stray bullets.

Contemporary readers may feel that the lion, wolf, and coyote would not have been killed had they gathered to eat garbage, as did the bears. It is also obvious that public familiarity with the bear as an individual did much to save it from the same fate. The grizzly's seemingly adaptability and tolerance of man resulted in a corresponding tolerance, even affection, from man himself.

Man's admiration of the grizzly did not, however, prevent the animal from being destroyed by park personnel in ever greater numbers from 1930 onward. In the years 1930 to 1943, 51 grizzlies were killed by the Park Service.

The coming of World War II signaled the end of even the illusion that the garbage-fed grizzly and man could co-exist. In 1941 the bear feeding and viewing site near

Canyon Village in Yellowstone was closed to the public and eliminated as a source of food for the grizzly. Consequently, the grizzlies that had used the "viewing site," or dump, moved into the campgrounds the following summer seeking the food that generations of grizzlies had come to expect. By the end of the following summer 28 more grizzlies had been shot.

The bear problem in Yellowstone, then, is basically tied to environmental pollution. Generations of grizzlies have substituted man's garbage for natural foods. The dumps, in some cases near big campgrounds, have tended to localize the bear population near man's own concentrations. Inadequate garbage cans invite hungry bears, who soon learn that man's food is much better *before* it becomes garbage. Such close contact with man, plus the scent of man on the garbage eaten, seems to have led to loss of fear of the human scent. In rare instances some bears may show signs of difficulty in dissociating man's food from man himself. This, of course, is the ultimate disaster for the bear.

IN SEPTEMBER 1969 and November 1970, the First and Second International Conferences on Bear Research and Management took place. Ultimate goal of the meetings was reestablishment of a natural population of bears living natural lives, with minimum interference from or interaction with humans.

With this goal in mind the human-grizzly relationship has come full circle. Now some men would like to share a small part of their habitat with the grizzly, much as the American Indian shared his world with that great bear be-

fore the white man arrived. In order to achieve the goal, it seems obvious that all human food, waste or otherwise, must be eliminated from the bear's diet, forcing a return to natural foods. Today a controversy exists over the proper sequence of steps that will lead to complete elimination of all artificial food. One view favors the abrupt termination of all garbage feeding, while another says that garbage feeding should be phased out slowly—that "weaning" should occur gradually.

The best method, it would seem, is that which leads to the fewest bears invading campgrounds in search of artificial food. Much information exists on the behavior of both garbage-fed and "wild" grizzlies, but little is known about the grizzly in transition—or even if such a transition is possible. At this point, despite all research done on bear behavior, trial and error seems the only way.

Park records support the statement that over the last 40 years the "wild" grizzly has been less dangerous than bears who have had extensive contact with man. Of the 63 known injuries attributed to the grizzly in Yellowstone, only 3 occurred in back-country areas; and all three involved a female in defense of her young.

Statistically the grizzly accounts for few injuries in either Glacier or Yellowstone parks. During the 1960's, when national park visitation was increasing dramatically, the injury rate rose to its high point of about one person per 1.5 millions of visitors—about 0.00007 percent. Actual fatalities in the 98 years of Yellowstone Park existence to the date of this writing total five persons, or about one every 20 years. By way of comparison, more than 50,000 Americans were killed on the public highways last year without benefit of general emotional display.

Although research on the grizzly has been conducted by the National Park Service for some years past, it seems obvious that the 1967 deaths furnished the greater part of the impetus for today's searching bear studies. The following paragraphs appear in a report presented at the Second International Conference of Bear Research and Management by Glen F. Cole under title of "Preservation and Management of Grizzly Bears in Yellowstone National Park":

The two facilities and three injuries to humans within Glacier Park during this period (1930–1970) were caused by animals that habitually frequented developed areas to obtain garbage or camp food.

The suggested relationships in Yellowstone Park were that human influences in the form of artificial food were basically responsible for most (95 percent) of the grizzly-caused injuries over the past 40 years.

There is evidence that as early as the 1920's Yellowstone Park officials recognized that artificial food altered bear habits and led to an increase in the rate of human injuries. Cole states that "park objectives to preserve a grizzly population under natural conditions and provide for the safety of visitors appear to have been formalized during the 1930's."

Thus it seems obvious that the relationship between garbage-fed bears and human injuries was established, or strongly suspected, at least 50 years ago. Yet the bears were fed garbage for public viewing until 1941, when several sources of food were abruptly cut off with the ensuing destruction of 28 bears. Numerous open-pit dumps were maintained in Yellowstone until 1969, and one large dump remained in use during the summer of 1970. Bear-proof

garbage cans were not installed in campgrounds until 1968 or 1969.

Belatedly the Park Service is moving rapidly toward elimination of all artificial food in the park environment. Bears found in close proximity to campgrounds or other developed areas are being transported into remote sections of the park by vehicle, boat, or helicopter. Efforts are being made to arrange for the transfer of bears to wilderness areas of other states, where the animals once occurred naturally. However, cattle and sheep interests have so far succeeded in making all efforts at interstate transplanting unsuccessful.

Since 1968 Park Service personnel have been engaged in a massive program of public education on camping and hiking in grizzly country. Stiff fines are contemplated for people who violate the "no bear-feeding" rule, and increased patrolling of campgrounds and transplanting of troublesome bears is planned. It is hoped that increased funding of these programs will lead to both greater safety for human visitors and less occasion for the destruction of bears. Like the rest of the world, the National Park Service is now trying earnestly to cope with problems that originated in an earlier and less complex world.

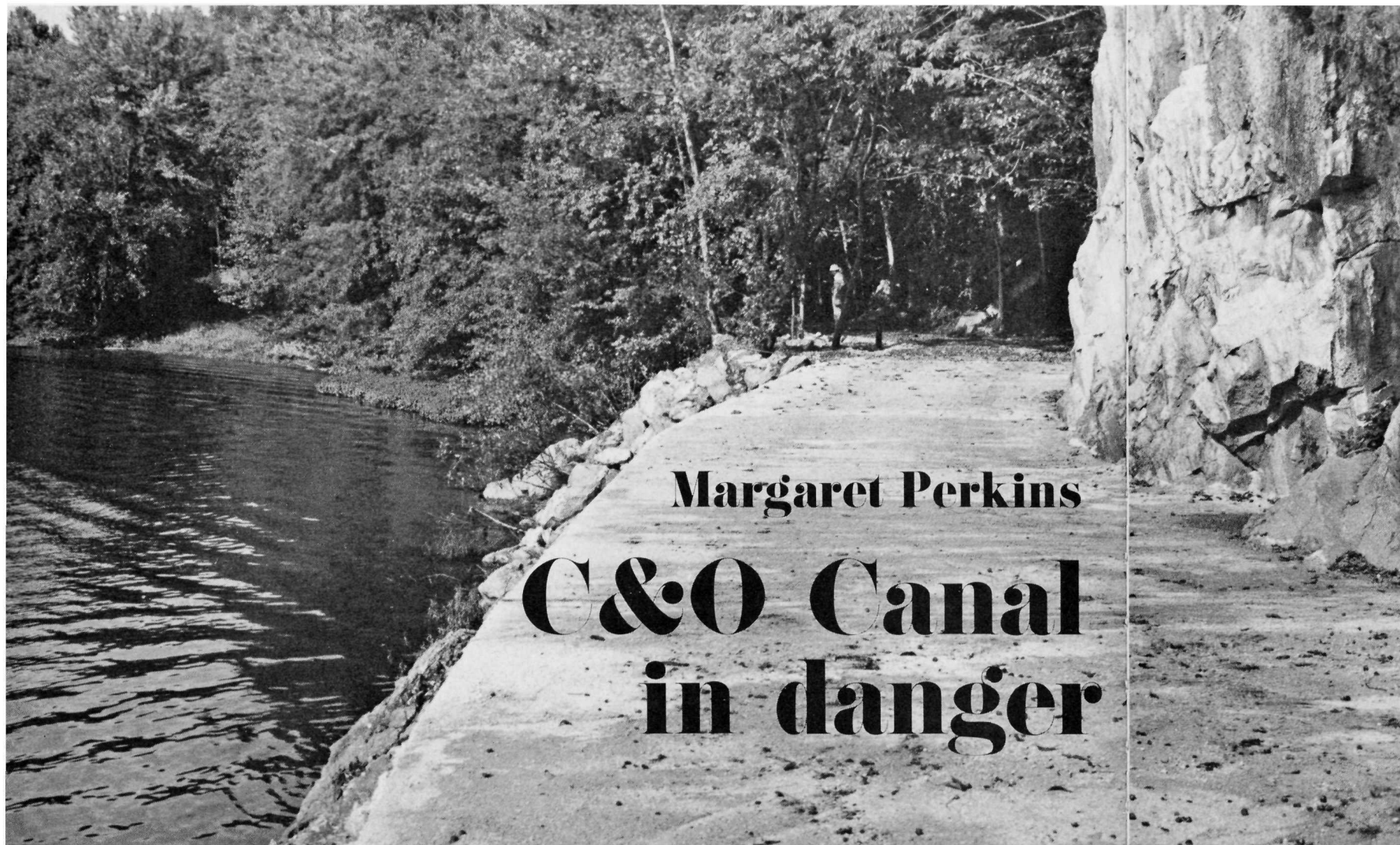
THE GRIZZLY now existing in the parks of Yellowstone and Glacier is a creature shaped by man. The fear of man, first learned by the bear at great cost, has been eliminated in their last refuges. The grizzly of today is a by-product of man's desire for amusement and convenience.

There are some people, even today, who urge that the animal again be dealt with in the most "convenient" way, meaning, of course, extermination. The direction now being taken in the matter by the Park Service will not please this group, for the aim is to reestablish a truly wild grizzly in one of its last refuges. Beyond the shrill cries of the few, the Park Service is likely to be supported in its program by the majority of the American public.

If the goal of a wild, independent population of black and grizzly bears is attained, however, the public will certainly see fewer bears along park roads—a possible topic for complaint. Additionally, some remote areas of the parks may have to be placed "off limits" to human use, and stringent visitor regulations may be needed. In short, the park-going public will have to accept many changes, some of them perhaps unwelcome.

By public commitment to the existence of a wild grizzly the Park Service at the same time reaffirms the reason for a park system—a system of units in which man is but a visitor, an observer of a remnant of wild America. If the grizzly cannot survive in a national park, where, then, can he survive? ■

A. Stephen Johnson has taught biology and general science in junior high and high schools and currently teaches science in Tucson, Arizona. He worked as a ranger-naturalist for three summers in Grand Teton National Park, which gave him the opportunity to pursue a special interest—photographing predators. He devoted the summer of 1970 to grizzly study, and during the summer of 1971 he and his wife canoed to Admiralty Island, Alaska, to photograph the Alaskan brown bear.



Margaret Perkins C&O Canal in danger

For most of the length of C & O Canal National Historical Park one can walk along a gently winding path, like the one at right, that parallels the canal in some places and the river in other places. At old Potomac Dam 5 (above) the National Park Service has replaced the original towpath with a concrete slab.



PHOTOGRAPHS BY BARBARA YEAMAN

The C & O Canal is once again in danger. At one time a target for highway builders, the new national historical park, which stretches from Washington, D.C., to Cumberland, Maryland, along the Potomac River, has recently suffered clumsy attempts by the National Park Service to fill it with recreational facilities and now faces a bigger threat from fast-moving commercial developers. Those who prefer natural recreation in the 185-mile-long park have put a halt to NPS's heavy-handed activities—but the halt is temporary and the job of persuading the Park Service and private business interests to bend to the will of the public is a hard one.

In the early 1950's the Bureau of Public Roads, in cooperation with the state of Maryland, planned a water-level highway that would have paved over the canal for its entire length. The National Park Service, which had custody of the canal property but had not included the canal as a unit in the national park system, gave its consent.

Citizen support for the canal came to life in 1954. In March Justice William O. Douglas led a hike from one

end of the canal towpath to the other to draw attention to the road builders' threat. Hundreds joined the original band of hikers at some points along the trail, and by the end of the 8-day trip public opinion had swung in support of saving the old canal. Sentiment grew so strong that a year later NPS abandoned the highway plan and instead encouraged protection of the canal as a national park.

After 17 years of sustained hope and effort by hundreds of people, the C & O Canal National Historical Park became reality in January 1970. The park was created expressly to make a natural environment easily available to people in towns and cities along the canal. The park provides a healthy natural environment rich in trees, water, and wildlife; a charming historical area that is a working example of the engineering successes of the old canal builders; and a special place for inexpensive outdoor recreation. The towpath is a good trail for hiking, biking, and, in some sections, horseback riding. The banks of the canal and the river provide abundant areas for primitive camping, bird watching, and ecological study. Canal his-

tory is expressed everywhere—in the canal bed and towpath, in the 74 lift locks, in scores of lockhouses, and in the 11 stone aqueducts.

While the creation of the park was being considered by Congress in 1970, those who testified in favor of the park (and every witness did) repeatedly counseled against heavy development. In testimony before the National Parks and Recreation Subcommittee of the House Committee on Interior and Insular Affairs, Spencer Smith of the Citizens Committee on Natural Resources said: "If access and development are accentuated to the point where the area is overrun by those wishing to appreciate its beauties, the area can be destroyed by overuse, thus eliminating the purpose for which it was established at the outset."

This point of view was endorsed by Congress and expressed in the Senate report concerning the park: "For young and old, however energetic or lazy, the park will provide places to hike and cycle, to fish, to paddle a boat or canoe, or simply to sit quietly, free of the rush and roar of a contemporary society."

The actions of the National Park Service as it exercised its new stewardship over the park, however, were a far cry from these sentiments. NPS took a few quick steps to open up the narrow wooded park to motorized traffic, both automobile and boat, in heavily concentrated recreational areas.

In the haste of development NPS has destroyed a number of significant ecological and historical features. Three parking areas have been built in the park next to the river—one at Taylor's Landing, 82 miles from the outlet lock in the District of Columbia, and two at Big Slackwater behind old Potomac Dam 4. The parking lots can hold about 65 cars with boat trailers and additional unencumbered cars. Three powerboat launch ramps leading into the river have been constructed, two at Taylor's Landing and one at Big Slackwater. The parking lots are served by newly cleared and paved access roads and steel-beamed bridges over the canal.

Along the towpath west of Big Slackwater the intrusion of motorized traffic into the heart of the park is even greater.



Behind several dams on the Potomac, canal barges were routed into the river slackwater. Stone retaining walls were built on the river banks, and the towpath followed on top of the walls. Remains of an old retaining wall are pictured above. Below, at Potomac Dam 5 the Park Service has paved the old stone wall and towpath with concrete.

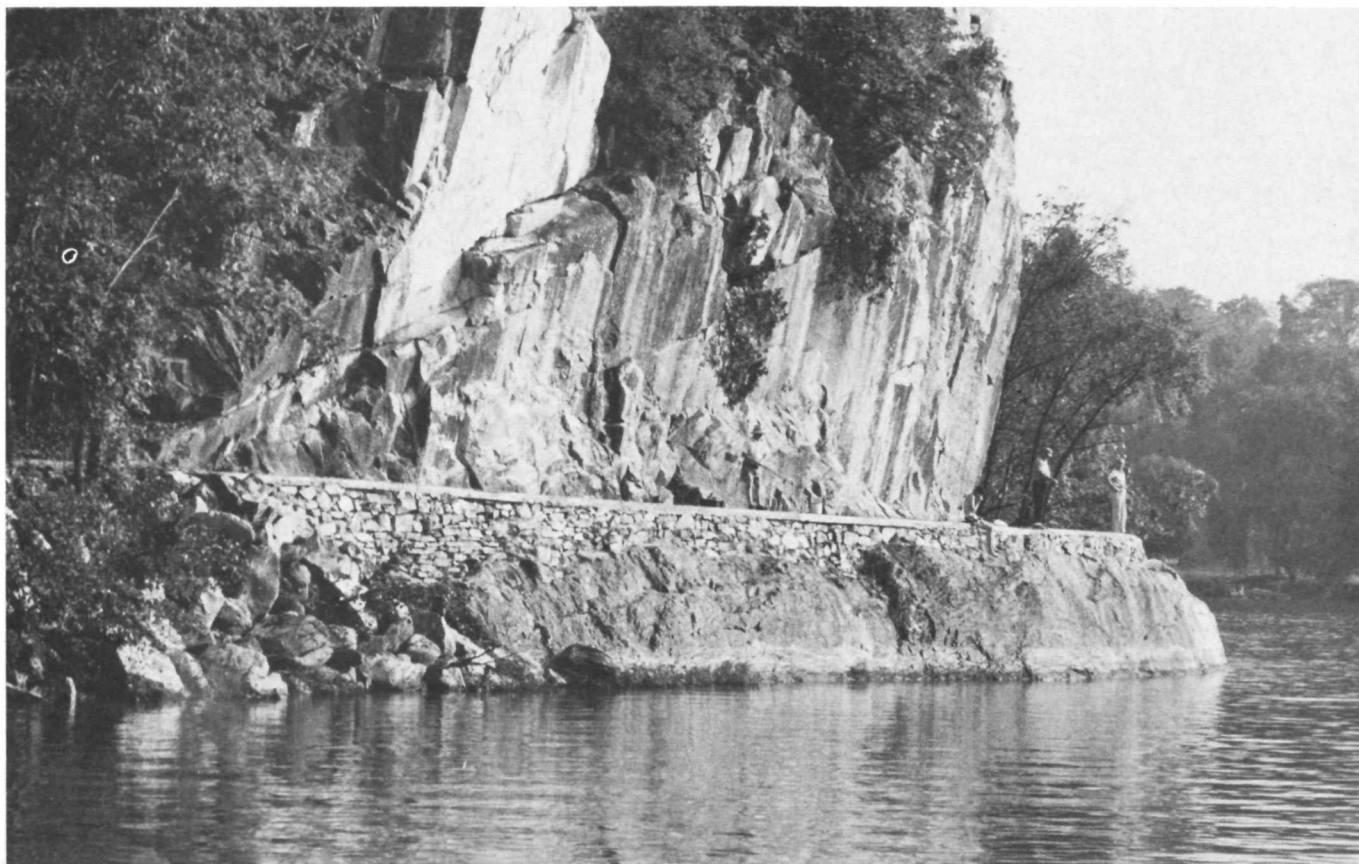
The narrow towpath has been raised and widened into a one-lane road. A wide swath of trees has been cut down both for the right-of-way and next to it to provide turn-arounds for construction equipment and trucks. Countless trees have been gouged and scarred. In the process of widening the towpath, which parallels the river at this point, large amounts of sand and rock have been dumped on the roots of the trees lining the river. As a result these trees are leaning toward the river at perilous angles. The destruction continues for about a mile to a point where cliffs jut close to the river.

At Potomac Dam 5, 106 river miles from Washington, the towpath has not been widened as broadly as at Dam 4, but cliffs there have been blasted into. Where once were sloping cliffs and a twisted towpath now are blast-scarred vertical walls underlined by a cement shelf. Gone are the scars of towropes worn into the stone by hundreds of barges pulled around this narrow point in the towpath.

Park Service policy with regard to the C & O Canal has been kept from public scrutiny. The agency has steadily refused to release drafts of its master plan for the park and also has refused to set a date for public hearings on the master plan. Thus, construction has taken place without a completed and approved master plan—a breach of NPS policy. Initially NPS deemed unnecessary an environmental impact statement (as required by Section 102 (C) of the Environmental Policy Act of 1969) on its paving activities. An NPS-sponsored advisory commission, which is supposed to channel civic input into the plans for the park, has just recently been appointed—more than 10 months after it was authorized.

Since the controversy over NPS construction began in summer 1971, it has begun to seem as though the actions

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THE COMMUNITY OF LIFE

An address delivered by Anthony Wayne Smith, President and General Counsel, National Parks and Conservation Association and Chairman, Environmental Coalition for North America, before the Annual Meeting of The Humane Society of the United States at Newport, Rhode Island, on October 16, 1971. Mr. John A. Hoyt is President of The Humane Society of the United States. He is the member from the HSUS of the Steering Committee of the Environmental Coalition for North America.

IT WAS WITH A feeling of deep gratitude that I received and accepted the invitation to speak to the Humane Society of the United States on this occasion.

The preservation of wildlife everywhere, which is one of the major purposes of the National Parks and Conservation Association, and the furtherance of humane attitudes toward animals generally, which is the major purpose of the Humane Society of the United States, are closely related and mutually supportive activities.

The NPCA and the HSUS should undertake to work together increasingly; we should have done so long ago, and perhaps the present mortal crisis in which all life on earth finds itself at this time can bring us rapidly together.

I shall be speaking to you as President and General Counsel of the NPCA, except insofar as I may touch on questions involving legislation, in respect to which I have no authority from NPCA to comment, except where invited officially by Congress, but I shall speak on such matters either as Chairman of the Environmental Coalition for North America, where I am not under comparable inhibitions, or as an individual.

THE NATIONAL PARKS and Conservation Association was founded in 1919 at the behest of Stephen T. Mather, the first Director of the National Park Service, with a view to assisting the Service in enlarging and protecting the National Park System. It has functioned over the intervening years in a supportive capacity to the Service, but also as a constructive critic. It has a membership of nearly 55,000 people in the United States and abroad; it publishes National Parks and Conservation Magazine, the Environmental Journal, received by all members. While it retains its primary interest in the Parks, it has broadened its responsibilities over the years to include the entire environmental field. It shares the humane purposes of the Humane Society of the United States.

The Environmental Coalition consists of individuals associated with but not necessarily representing most of the major conservation organizations of America and several of the more powerful labor organizations. The major farm organizations have also joined with us from time to time in one relationship or another, where there was common ground. The Coalition has a Steering Committee, of which I am Chairman, and of which your President is a very welcome member. I am quite certain that this relationship will prove valuable, indeed indispensable, as the environmental movement grows and strengthens itself in the United States and abroad.

The major purpose of the National Park System is the protection of large areas of the original natural country of North America for its scenic, wildlife and recreational value. This protection is to be accompanied by the enjoyment of the Parks by people, and hence the Parks are to be accessible, but enjoyment must be by methods which are compatible with the preservation of natural conditions and wildlife.

The Parks have been heavily overcrowded in recent years

because our population has been growing, people have been traveling more, and there is a great need on their part to escape the unlivable conditions which are so prevalent in our big cities.

The NPCA has proposed a strategy for dealing with overcrowding in the Parks, particularly crowding by automobiles, which is much more dangerous than crowding by people. We have recommended that the Parks be protected largely as wilderness without roads, permanent structures, or mechanized equipment. We have recommended that more campgrounds be developed in the national forests which surround most of the Parks, in the public domain, by the Indians on the reservations if they desire, and on private land outside the public lands.

We propose that facilities in the Parks, such as roads, lodges and campgrounds be stabilized at present levels and perhaps gradually reduced. Long distance access to the Parks would be provided by motor coaches traveling over the existing roads. Concessions would be granted to consortiums of private resort operators outside the Parks to run the coaches.

The proposed system would require interdepartmental planning in the federal government, and cooperation between the state and federal governments, but the President could initiate the system without further legislation.

THESE PROPOSALS have been placed before all the responsible agencies in the Executive branch. They usually get polite approval, but nobody ever does anything. The Environmental Coalition for North America will be taking combined action to push this issue. We need the help of the humane movement to put it across.

The NPCA works continually for the preservation of wilderness throughout America. The major part of most of the big National Parks should be preserved as wilderness. We support the permanent protection of wilderness in the National Forests and the Wildlife Refuges as well. Indeed, wilderness is a thing to be preserved wherever it survives; there is little enough of it left in America.

Wilderness should be protected for its own sake. It is part of the natural setting of human life. The magnificent scenery of the National Parks should be preserved as wilderness. Within the roadless and unsettled country which we call wilderness the wild animals have their last best chance of survival. We need the help of the humane movement in our efforts to protect wilderness throughout America, indeed, throughout the world, and in our efforts to protect the Parks.

The National Parks are among the finest of our wildlife refuges. As the National Park System spread from the original idea in Yellowstone 100 years ago to other countries all over the world, it often served mainly for wildlife survival purposes.

The NPCA is concerned with the protection of the National Park System from the scenic, recreational and historical points of view, but also from the point of view of wilderness preservation, and very basically with respect to wildlife protection and enjoyment.

THROUGH THE National Parks and Conservation Magazine, we try to further an attitude toward wildlife which is one of appreciation, not exploitation. Great numbers of people wish to view wildlife in its natural habitat where it is not frightened. Wildlife photography is a major sport.

The wildlife preservation movement needs the help of the humane movement to protect wild animals for their own sake, for scientific, aesthetic, and educational purposes, and for the enjoyment and appreciation of people who care for animals.

The NPCA has a primary concern with preventing the extinction of animal species in the United States and all over the world. The lists of endangered species maintained by the International Union for the Conservation of Nature and by the Department of the Interior are frightening in their length.

The big predators, the wolf, the cougar, the grizzly, the polar bear, in the United States, and elsewhere such long-familiar characters in all our lives as the lion and the tiger, and in the seas the whales and other oceanic mammals: these and countless other life forms are in great danger.

National Parks and Conservation Magazine runs one major endangered species article every month. We have a list of articles in preparation which looks ahead several years. If we were to publish such articles for a decade we would hardly begin to cover the subject of endangered species.

We try not merely to explain the importance of the animal in question and the perilous situation in which it finds itself, but to relate the danger to the economic and social background of the problem, and to propose practical measures for survival. This is most certainly a humane issue, and we need the help of the humane movement in getting this work done.

One of the basic principles of National Parks management which the NPCA has always supported vigorously is that there should be no sports hunting in the National Parks. This is the established interpretation of the National Park Service Act, and a number of the specific National Parks Acts contain express prohibitions. The NPCA has had to do battle with the National Park Service and with the state fish and game commissioners on this issue on occasion in the past. We need the help of the humane movement in such efforts.

About ten years ago the state fish and game commissioners attempted to get sports hunting established in Yellowstone National Park as what was referred to as a management tool to reduce the excessive populations of elk. The elk had multiplied beyond control as a result of the virtual elimination of the big predators and bad game management practices in surrounding states. The vegetation in the Parks was being destroyed, and everyone agreed that the elk herds must be reduced. We opposed the use of sports hunters as so-called deputies for this purpose; as a result, a special Commission was appointed by the Secretary of the Interior which recommended against hunting; and the day was saved.

We are engaged right now in a similar battle with the National Park Service and hunters' organizations to prevent the use of sports hunting to eliminate feral goats from the Hawaiian National Parks. The original native plant and animal communities of Hawaii were subjected to great stress when the white man arrived, bringing his domestic animals with him and many exotic species of plants and animals from all over the world. A number of beautiful birds and many kinds of important plants became extinct. The domestic goat was one of the worst of the invaders, destroying vegetation, and with it the birds and other creatures dependent upon it. We take the position that the feral goat must be eliminated from the Parks; it should not be perpetuated in the Parks for the entertainment of hunters; hunters should not be allowed to shoot goats in the Parks for sport under the guise of management by deputy rangers.

THESE ARE ISSUES on which there may be divisions of opinion between the humane movement and the conservation movement from time to time, but in respect to which we should strive for closer understanding, because our purposes of humane treatment for animals and the survival of species are basically identical.

The conservation movement includes people with different attitudes toward hunting. You might say that most of the conservation organizations include hunters, non-hunters, pro-

hunters, and anti-hunters. The movement as a whole does not oppose regulated hunting on public lands other than state and National Parks, nor on private land. There is virtually unanimous agreement among all the organizations against sports hunting in the National Parks; we need the help of the humane organizations in maintaining this position.

Regardless of their attitudes toward hunting, conservation organizations unite in the effort to preserve the natural habitat for wild animals against encroachment by urban, industrial, and other development. This means, for instance, fighting against wetlands drainage. The problems of cooperation and coalition among people with different viewpoints on a number of issues must be resolved if the conservation, environmental, and humane movements are to be effective. A measure of charity and tolerance for different viewpoints is essential if the necessary strength is to be assembled. I believe you can count on practically unanimous support from the organizations in the environmental movement for the humane programs you favor.

PERHAPS THE GREATEST danger for wildlife is the loss of habitat. Farms and cities are closing in on the natural country of the planet everywhere. The human population is growing, and human demands on space are increasing even faster. The need is very great to enlarge the National Park Systems of all countries of the world and the Systems of equivalent reserves such as national forests, wildlife refuges, and protected recreation areas. Here again the humane and conservation movements should be working together.

Another of the major dangers for wildlife is the abuse of pesticides. This means insecticides, fungicides, herbicides, rodenticides, and straight wildlife poisons. Agriculture has come to be heavily dependent on chemical insecticides and other pesticides. The so-called hard pesticides build up in the food chain from the smaller herbivores to the larger carnivores and predators, including birds like the eagle, and predators like man. Some carry sterility, deformity, and cancer as they accumulate. The insects are becoming immune.

We need to get over from hard pesticides to the so-called soft pesticides, which do not build up in the food chain, and then as rapidly as possible to biological controls. The alfalfa weevil, for example, will probably be controlled by parasitic wasps. This massive changeover will be a very difficult thing to accomplish, technically and economically; conservationists greatly need the help of the humane movement in these efforts.

The abuses of insecticides which have been standard in the United States were promoted vigorously by several of the agencies in the Department of Agriculture. The agricultural chemical companies are known to have exercised an undue influence in a number of programs of the Department. These operations have now been transferred to the Environmental Protection Agency in part. The environmental movement, including the humane movement, should now unite in monitoring the work of the EPA, and any residual activities in the Department of Agriculture to cut down on the abuse of pesticides sharply.

WILDLIFE IS POISONED deliberately by the Government throughout the range land of the West. The program is primarily for the supposed benefit of the sheepmen. It is aimed to a considerable extent against the coyote, but it results in colossal destruction of wildlife of all kinds. The infamous chemical 1080 is one of the main poisons, but there are many; when the coyotes are poisoned, other wildlife feeds on the carcasses, and the poisons, which are persistent, build up in the food chain. The poisoning practice has grown up in the federal government over decades; it is an undeserved and unnecessary subsidy to a special interest; there are other ways of protecting the legitimate interests of sheepmen.

But basically, for our purposes today, the practice is inhumane; men cannot afford to indulge in such cruelty; it reflects a callousness toward life which may be the greatest of all dangers to modern man himself. This is a place where conservationists in the narrow sense must join hands with the humane movement, and all must work together to put an end to these barbaric activities.

The restoration of predatory animals should be another common cause for the humane and conservation movements. One of the reasons why the direct reduction of excess game populations has been necessary at times even in the National Parks is the loss of the predators. The wolf maintains a perilous existence in small numbers in balance with moose in Isle Royale National Park. It survives in the great open spaces of Canada and Alaska. It is a beautiful and affectionate animal and presents no great danger to man; if it can be reestablished in our parks and forests, in suitable regions, it should be. It can help to keep the browsing animals in check; the predators should be allowed to pick up their ancient responsibility for culling the ungulate herds. The humane movement could help the conservation movement on this issue.

The same is to be said, of course, for the cougar. The cougar should be a completely protected animal, except in the rare cases where an individual has come to prey continuously on livestock. Bounties for the killing of all forms of wildlife should be eliminated, and certainly with respect to predators. Compensatory payments for losses to sheepmen and cattlemen should be substituted. The conservation and humane organizations need to be working closely together to restore the predators, not only throughout America but throughout the world.

When people talk about the endangered animal species of the world there is much excellent emphasis on turtles, marine mammals, birds, big and little cats, wolves, ferrets, and so forth. Some of these animals are quite spectacular, and people were brought up to think about them as part of the world.

THE INSECTS HAVE A harder time. Many entomologists seem to regard insects mainly as something to be destroyed. An insect is always thought of as a pest. All this is dangerous and absurd; the butterflies, the crickets, the katydids, the bees, are invaluable and irreplaceable parts of the natural pattern of the world; they give us color and beauty and music. Where insects do serious damage they will probably be controlled in the future to a reasonable extent by the use of other insects; beyond that they should usually be let alone.

Meanwhile, a great many of them hover on the verge of extinction, through the abuse of pesticides and the loss of food and habitat, and the conservation and humane movements ought to be working together to stem this tide of destruction, to rescue the endangered species, and to restore the insects and the spiders to a safe place in the community of life.

The fate of wildlife throughout the world depends to a considerable degree on the way the forests are managed. In the NPCA we insist that timber harvesting should be conducted by methods which preserve the soil, watersheds, wildlife, and recreational and scenic values. This cannot be done, in our opinion, if the presently prevailing methods of large-block clear-cutting continue. Moreover these methods are usually accompanied by re-seeding, preceded by wide-spread use of poisoned grain to destroy the small rodents of the fields and woods which otherwise eat the tree seeds which are often dropped by airplane. The birds of course also eat the poisoned grain.

SUCH BRUTAL METHODS are not only inhumane but are also unecological. Forests do not have to be managed in this fashion; there are other methods, such as individual tree selec-

tion, group selection, shelterwood, and small-patch clear-cutting which ought to be followed if our purpose is the genuine multiple-use of the forests and if our methods are to be both ecological and humane.

The humane movement has everything to gain by joining in these efforts; among the first considerations in the humane treatment of animals must certainly be the protection of the natural home country of wild animals, which is so largely in the forests.

YOU MAY BE AWARE that there has been some scientific experimentation done in recent years on the question whether plants have feelings, such as anxiety and relief. The experiments seem to have been rather carefully controlled. They suggest an affirmative answer; such an answer would not be incompatible with an organic philosophy like that of Whitehead. A suspension of judgment is required in the scientific spirit. You may find the field of your humane responsibilities considerably enlarged.

In any event, a feeling of concern and responsibility for all life everywhere is part of the outlook of any fully civilized person; the notion that plants feel might well be part of a genuinely humane outlook on life; that outlook is probably what we need to prevent mankind from plunging into murder and suicide by war and pollution.

I have mentioned the forestry interests of the NPCA. A great many environmental organizations have similar interests and outlooks. Related is the problem of the survival of endangered species of plants throughout the world. If the animals are endangered, vast numbers of plant species, from grasses to flowers to forest trees are teetering on the brink of extinction; many of them are already gone.

One way to save the endangered plant species of the world, short of getting human populations down to decent levels, would be to establish seed banks at botanical gardens, museums, and universities, not to speak of National Parks and Forests. Seeds can be gathered and replanted in cycle with their normal viability; many of them can also be frozen, and in that way can be held perhaps for centuries. The financial requirements of a worldwide seed bank program would be relatively small; there has been an enormous inertia, in scientific as well as conservation circles, with respect to the seed bank idea.

The humane movement is concerned, I take it, with respect for life everywhere; if so, and for all the good reasons why the endangered plants should be preserved, it should join with and stimulate the conservation movement into getting something done about seed banks.

No discussion of the ecological situation, hence no discussion of conservation or the humane treatment of animals can be fruitful without at least a reference to the problem of the over-population of the planet; nor, certainly, can any discussion of the economic and military situations of mankind be fruitful without reference to population.

THE HEAVY PRESSURES of rising population resulting from rapidly falling death rates while birth rates remain high are preventing the agricultural countries from achieving the increased agricultural production they need (despite the new grains) and the industrialization they need and desire. The prospect is for many countries to sink into graver poverty, malnutrition, and indeed starvation.

In the rich countries the impact of the population explosion manifests itself in congestion, pollution, disorder, instability, and complexity. The skies and rivers of the industrialized countries are filling with filth. The cities are bound into lunatic traffic patterns which thinking people should reject. The National Parks and Conservation Association advocates

the dissemination of an ethical norm of not more than two children; the adoption of a general standard of this kind would result in the stabilization of population in time and eventually in gradually falling population levels.

The long-range social and ecological results would be enormously beneficial; in any event, the survival of many of the endangered species of plants and animals throughout the world probably depends on getting some kind of population stabilization as rapidly as possible.

The problems of population are complex; they vary from nation to nation; but the conservation and humane movements must educate themselves in these fields, must cooperate to get and keep enough space on this planet for men to live together amicably, and to keep the plants and animals which ought to be part of the natural setting of our lives.

The environmental, humane, and ecological movements (for there are a great many benevolent trends at work in human society these days) converge into a worldwide international effort. The United Nations will be staging three important conferences in the next three years; on the Human Environment in 1972; on the Law of the Sea, dealing with all marine resources, including the animals, in 1973; and on Population in 1974. Out of these meetings, hopefully, will come new inter-governmental institutions for the protection of the environment, including the living resources, plants and animals, and the stabilization and eventual reduction of human population, worldwide.

It is my hope that the Environmental Coalition for North America may play an active part among the non-governmental organizations advisory to these conferences. The conservation and humane organizations of the United States and other countries should be working together through such agencies as the Environmental Coalition to gain and exercise influence in these worldwide deliberations in the years ahead.

The last half dozen years have seen a burst of interest in the protection of the environment. This growth has strengthened the hands of people who were concerned with the humane treatment of animals and who have been struggling to prevent the extinction of plant and animal species.

The interest may well have grown out of the discovery by large numbers of people in the industrial countries that they were about to smother themselves with auto and factory fumes and poison themselves with municipal, industrial, and agricultural wastes.

THE SCIENCE OF ECOLOGY is old. It did not emerge yesterday.

And yet, except for the explosion of interest in the human environment, it might have remained obscure for many more decades. But now everyone thinks he understands ecology, and many people do in fact know a great deal about it. Great numbers of people have recaptured a sense of their relationship to all life which was probably universal in savage societies.

And so you can think of the human situation at present as one governed by the ecological imperative; namely, that man must live within the network of all life, or destroy himself. This is essentially a scientific concept; but more than a scientific concept is needed if men are to act in accordance with that concept. Feelings about the matter are needed in addition; and so we need respect for life, but even more, we need to recapture the feeling of love for life.

When the Environmental Coalition, the NPCA, and many of the other organizations associated with the Environmental Coalition protested recently against the proposed nuclear blast at Amchitka, some of us asserted that the humane element in the problem was fundamental. Even if the adverse environmental effects of the explosion turned out to be less serious than supposed, there was none-the-less a moral effect. That great numbers of birds and oceanic mammals would be injured

and killed as a result of the blast, there could be no doubt. The result would return against men, because the blast would increase the callousness toward life which is prevalent in our culture. And that callousness may well be one of the major factors moving the world along relentlessly toward atomic and ecological death.

ONE SMALL TURN of conscience in this situation, like adding reverence toward life as a reason for not exploding the bomb at Amchitka, might mark a shift in the moral currents of modern life, might even save the day for mankind. And so we are talking about ecology, but more than ecology. We are dealing with the biological and physical relationships of people to all of the life around them. But we are also talking, when we speak of humanity toward animals, and a concern even for plants, with psychological attitudes on the part of people toward other life which may have much to do with the survival of the human race itself.

The history of the domestication of animals may perhaps be instructive to us. Assuming that the dog first joined the human encampments about 50,000 years ago as a scavenger, later as a watchdog, and eventually as a hunting dog, he was no doubt welcomed and preferred by men for these purposes. The process would have been facilitated by the development of a mutual affection; the more so because women were probably the domesticators of the animals.

Assuming that the cat joined the more settled agricultural human communities about 10,000 years ago after barley and wheat had appeared as the foundation of the early river basin civilizations, with the granaries attracting rats and mice, and with the cat keeping them under control, this process of domestication would also have been facilitated by the development of a mutual affection.

Sir Frank Fraser Darling has described the affectionate relationship of the early Aryan herdsmen toward their cows in their long march into India; this affection arises between any good dairyman and his cows to this day; it led to the cult of the sacred cow.

Natural selection can be visualized as favoring animals with an affection toward people and people with an affection toward animals. The process of domestication, on which civilization was built, can thus be thought of as based on love between men and animals. The survival of mankind in an ecological sense may be dependent on the maintenance of these emotions. Do not be ashamed of basing your environmental programs on the emotion of love for animals.

It has been a great pleasure, and indeed a matter of a certain relief to me, to be able to consult with you here today about the humane movement as part of the conservation movement. In the past, conservationists could speak of animals as something which people enjoyed seeing or photographing in the wild; or as of scientific importance; or as a resource with which hunters and non-hunters had a protective concern; or indeed about wild animals as a supplemental food supply.

I hope that we shall now be speaking throughout the environmental movement about the humane treatment of both domestic and wild animals, and that the humane movement and the conservation movement will lend each other increasing support in the years ahead.

At stake in these times is the survival of all life on earth. The technological powers of mankind have outrun its good sense. Men must recreate their sense of the community of life, of the interrelationships of all living things. They must create the national and international institutions which they will need to cope with overwhelming disorder in environmental matters. And they must build up the coalitions, submerging some of their differences, which will be needed for strength. Divided, we shall fail; working together we shall succeed.

Continued from page 18

of NPS are in response to pressures from commercial developers who want private profit from the park. Cleared for a widened road, the towpath along the shore of the Potomac, for example, would be a suitable site for a marina concession. Development of recreational camping, hotel and motel operations, trailer parks, and resort communities on the edge of the park could yield fortunes—as has happened in older parks like Mammoth Cave, Great Smoky Mountains, and Yosemite. But the C & O Canal Park is a ribbon of land at many points no more than a mile wide and frequently narrower. Overcrowding would quickly destroy it. Rather than a retreat from dirty cities, it would



Rubble from Park Service construction has scarred some trees and pushed other trees toward the river. In places the widened towpath looks suspiciously like a road intended for motor vehicles rather than a foot and cycle path.



become a catalyst for new sources of noise, air, and water pollution.

Although sometimes guilty of misusing its power, NPS has the capacity to protect the C & O Canal from commercial development inside the park boundaries. The Park Service can condemn land for federal purchase, an acceptable measure when both landowner and taxpayer get a fair deal and neither takes advantage of the other. Otherwise, people with small holdings inside park boundaries might be enticed into selling to developers, who can afford to wait and later sell at inflated prices to the government.

A loud outcry against the Park Service's treatment of the park has been registered by many organizations and individuals. Alerted by supporters of the park and the canal, the U.S. District Court in Maryland issued a temporary restraining order on construction in the park. Senators Charles McC. Mathias and J. Glenn Beall and Representative Gilbert Gude, all from Maryland, joined the ranks of the opposition. Over 50 people participated in a protest "walk-in" in mid-October at both Potomac Dam 4 and Dam 5, organized by the Canal and River Rights Council. Even before the walk-in and the court ruling, however, the politically sensitive Park Service agreed to stop all building in the park until the master plans and environmental impact statements are completed and reviewed by the advisory commission and the public.

Meanwhile, better methods must be found to allow participation by the public in the planning process. As a step in this direction, the Canal and River Rights Council and the Level Walkers of the C & O Canal Association are organizing citizens to write a "people's plan" for the park, including its edges. The plan will be written with input from as many people as possible and will make no pretense at being a technical document. An engineering statement is the domain of the professional NPS staff. All the people whose lives are touched by the park, however, should not be denied a part in its planning simply because they are not technically trained.

The construction halt in C & O Canal Park represents a victory of sorts for conservationists, but the real battle lies ahead. Exploitation of adjacent land by commercial interests is harder to prevent than NPS malpractices.

To control the proliferation of hotels and trailer camps next to the canal strip, land must be protectively zoned by the counties through which the park runs. To do so might be in the best interests of the counties as well as other park users: development of additional facilities might strain already overused sewage treatment plants, roads, police, and other community services.

Too many parks within the national park system have already been damaged by commercial exploitation. Friends of the C & O Canal are determined that their park will escape this fate. If they do their job well, the C & O Canal National Historical Park will be a model of land planning that could be useful in other parks as well. ■

Margaret Perkins is executive director of the Canal and River Rights Council, a young organization dedicated to protecting the C & O Canal and the Potomac River.

James Rathlesberger

DETERGENTS

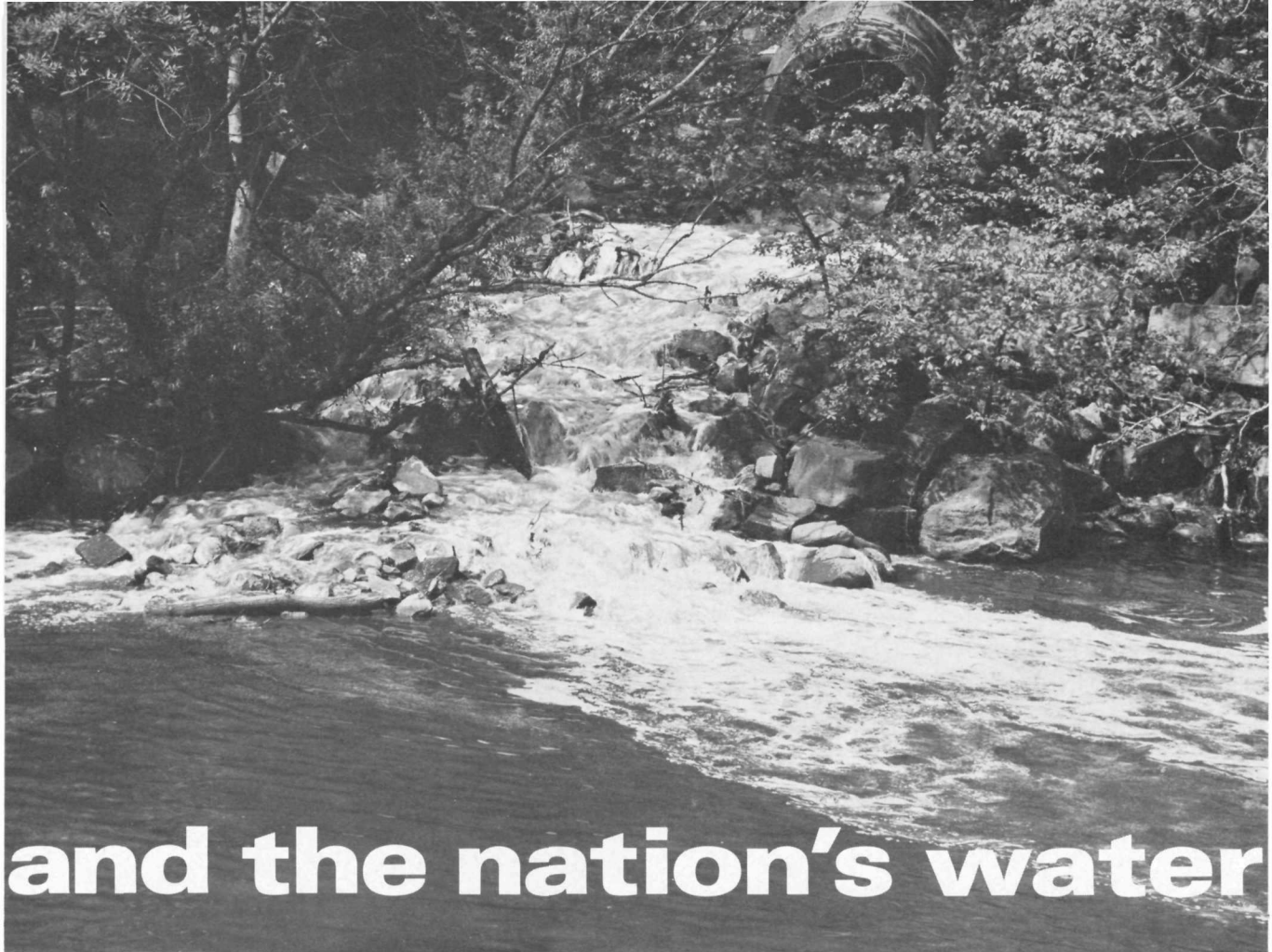


'Did you ever see a whiter wash?'
SANDERS IN THE MILWAUKEE JOURNAL

The urgency of the nation's eutrophication problems and the necessity of removing phosphates from detergents have over the past several years become dogma of the new conservation movement. Many areas of the country banned laundry products containing phosphates, and millions of consumers began using new nonphosphate detergents. Even Lever Brothers and Colgate-Palmolive, two giants of the detergent industry, began limiting the phosphate content of their products. But on September 15, 1971, the federal government, perhaps unwittingly, threw the nation's policy into a state of tumultuous confusion.

Jesse Steinfeld, the Surgeon General of the United States, called a press conference that day to warn consumers of potential health hazards from nonphosphate detergents. Charles Edwards, Commissioner of the Food and Drug Administration; Russell Train, Chairman of the Council on Environmental Quality; and William Ruckelshaus, Administrator of the Environmental Protection Agency, also were present; and the four men issued a joint statement on behalf of their agencies. "Certain of the non-phosphate detergents," read the statement, "contain ingredients that, if accidentally ingested, aspirated, or introduced into the eyes, may be extremely injurious to humans, particularly to children."

The intent of the message was not altogether clear. Steinfeld pointed out that "not all nonphosphate detergents are highly caustic," and Ruckelshaus said, "we continue to support the lowering of phosphate levels in detergents." But the story coming through the media on September 16 was



and the nation's water

Steinfeld's answer to a question. "My advice to the housewife," he said, "would be to use the phosphate detergent. It is safe for human health." Spokesmen for FDA say privately that this "was not part of the planned position, but," they explained, "it's pretty hard for one official to argue publicly with another." Thus Steinfeld captured the headlines; and while environmentalists were shocked or outraged, the detergent makers gloated. The consumer, to

whom the information was directed, may have given up all hope of getting any clear and consistent washday advice from the nation's capital.

Unfortunately, there is no doubt about the direction, and the impact, of the Administration's new policy. Consumers are advised to use phosphate detergents, and those areas of the country which have banned them as pollutants are urged to reconsider their actions. With new enthusiasm

why not soap?

Government spokesmen from Steinfeld to Ruckelshaus say they would like to ban phosphate detergents "as soon as we find something to replace them." That is also the claim of Lever Brothers, Colgate-Palmolive, and Procter & Gamble. But the possibility of going back to soap, which was replaced by detergents in the 1950's, has been given almost no consideration whatsoever.

Soap was always a safe and effective cleaning agent in soft water areas—and it does not pollute. In hard water areas, however, earlier generations had to use water softeners to get clothes clean, and water softeners are now judged to be potentially hazardous just as detergents are. However, 60 percent of our urban population, living in soft water areas, can use soap without water softeners, and the U.S. Department of Agriculture

announced on October 6 that its scientists had developed soap formulations "that will wash as efficiently in hard water as phosphate detergents."

The detergent people, once again joined by the Administration, have a variety of arguments against soap: it might, for example, wear clothes more than phosphates, and it might age automatic washing machines. Upon examination, however, none of these problems seems so great as is claimed, and none seems insurmountable. The real objection, suggested by Dr. Barry Commoner in his new book *The Closing Circle*, is that there would probably be less profit from soap than there is from phosphate detergents. The detergent industry increased its profits from 31 percent of sales in 1947 to 54 percent in 1967 by switching to detergents.

the detergent companies, led by Procter & Gamble, are challenging the antiphosphate laws in the courts, and even the pending international agreement for saving the Great Lakes is being held up because of the turnabout.

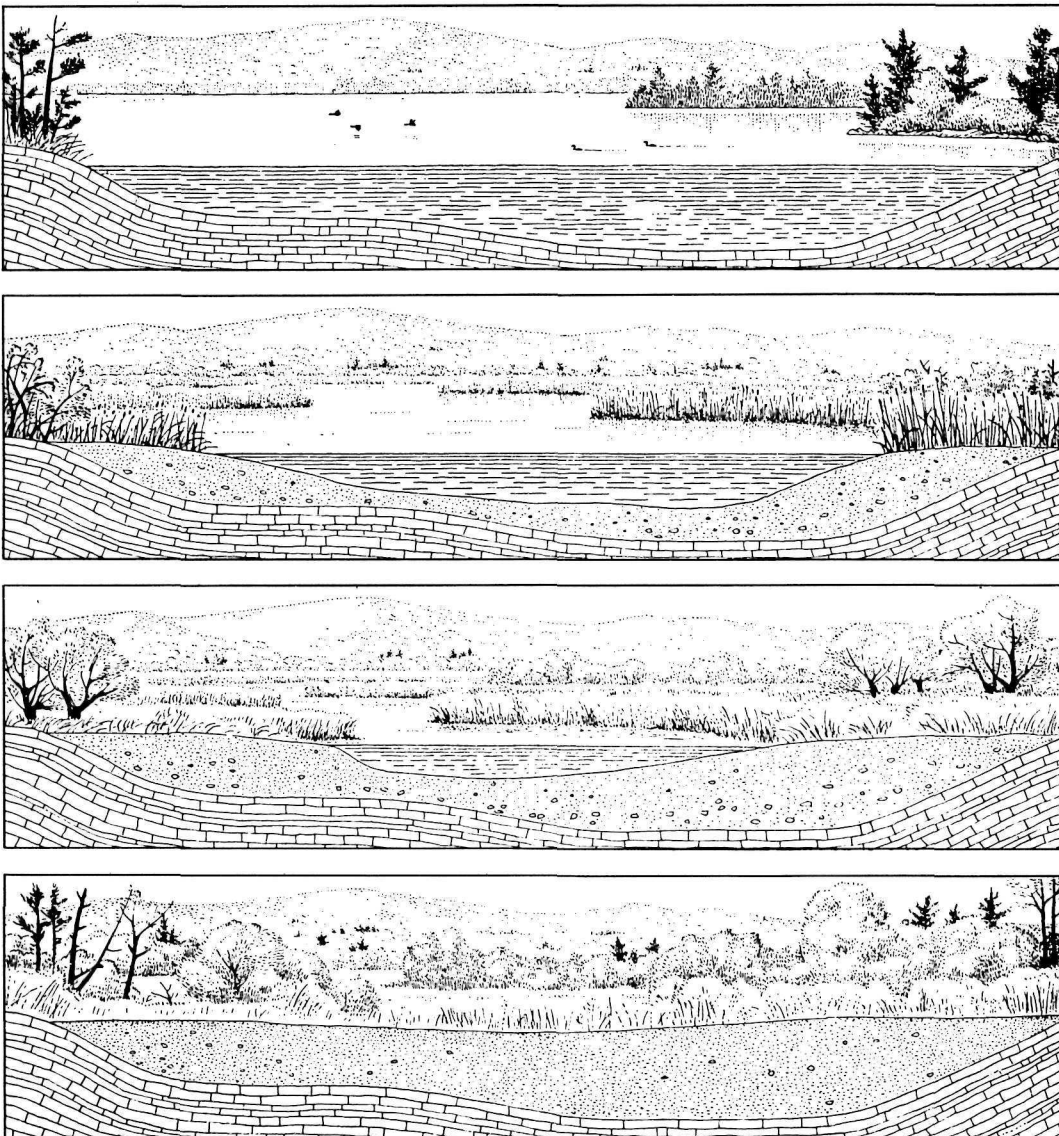
The anger of conservationists is not a knee-jerk reaction, for the danger to our nation's water is real and growing. Lake Erie, for example, has seen at least 5,000 years of its natural lifespan disappear in the last 25 years because of eutrophication, and the Environmental Protection Agency estimates that there are additional problems in at least 32 states and 1,000 bodies of water. But the government now says there are serious hazards from nonphosphate detergents and therefore plans to stop eutrophication not by taking phosphates out of detergents but by taking the phosphate out of waste water sewage through improving the efficiency of sewage treatment plants. The conservationist's bitter pill is that neither strategy will probably be sufficient all by itself. Improved waste

water treatment is necessary, but so is the removal of phosphates from detergents. Half the country's treatment plants are already overloaded, and each year an additional 1,000 communities outgrow their systems. The construction of all the necessary plants will obviously take many years; and many lakes, reservoirs, and other bodies of water could meanwhile be degraded.

At the same time no one can overlook a potential danger to children. The incident that set off the safety-versus-the-environment detergent debate was the death of a young Connecticut girl who accidentally swallowed a handful of nonphosphate detergent. *But the fact still remains that there are safe and effective nonpolluting detergents.* Admitted even by Jesse Steinfeld, who has allowed Lever Brothers to quote his "advice to the housewife" in full-page newspaper ads, the existence of such products apparently was overlooked by the government's decisionmakers. It was also forgotten by the nation's press. The Armour-

"Eutrophication" is the normal aging process that occurs in lakes and ponds during which they are eventually converted into dry land. Various nutrients in the water, including phosphorus, stimulate growth of algae, which consumes oxygen as it dies and decays. Robbed of their oxygen supply, fish and other forms of aquatic life die. The rotting dead matter accumulates on the lake bottom, and eventually the water is transformed into marsh, bog, and finally solid ground. Under normal conditions eutrophication occurs slowly over thousands of years, but man has accelerated the process by flushing additional nutrients through his waste water. Lake Erie, for example, is believed by many to be a "dead" lake already: choked with algae but with too little oxygen to support higher-level fish and plant life. The President's Council on Environmental Quality, before the recent turnabout, said eutrophication "is emerging as perhaps the single most difficult water pollution control problem." Phosphates, it said, "are still the most important nutrient to control if eutrophication is to be successfully attacked." Detergents contribute about 2 billion pounds of phosphate, or about 50 percent of the total phosphate load, to our nation's water each year.

(The drawing at left is from "The Aging Great Lakes" by Charles F. Powers and Andrew Robertson. Copyright © November 1966 by Scientific American, Inc. All rights reserved.)



Dial Company, however, claims their nonphosphate detergent "is as safe as popular brands of phosphate detergents." The makers of Spring Clean, another nonphosphate, argue that it is "a less hazardous product than several major phosphate brands." Shaklee Products, the makers of Basic L, report a perfect safety record and maintain that there is at least one instance in which a child ate Basic L and experienced no harm.

For the most part these are valid claims. Under the new Federal Hazardous Substances Act FDA is responsible for testing detergents and making certain that they are fully and properly labeled with cautionary warnings by the manufacturers. So far, they have checked 39 products, including some with phosphates and some without. Of only four products found not to require cautionary labeling, one was a low-phosphate and another was a nonphosphate detergent. Indeed, many of those products found to be most hazardous were phosphate brands.

The real significance of the test results, however, seems to lie in the facts that all but 4 of the 39 detergents were found to require cautionary labels and that the safety range of phosphate and nonphosphate detergents completely overlapped. The Surgeon General has expressed the point well. There "are no non-hazardous substances," he said, "there are only non-hazardous ways to use substances." Even those four products found safe enough to market without labels, in fact, are acknowledged to be minor eye and skin irritants. So there definitely are potential safety problems with detergents—with all detergents and not nonphosphates alone. All hazardous substances, including detergents, should be kept out of the reach of children. Every parent knows that. Swallowing toxic household substances is the most common medical emergency faced by young children. Each year more than 70,000 emergency cases and 300 deaths are reported, and surveys show the actual number of serious poisonings from these substances is 5 times greater than the number reported. The most hazardous products, however, are not detergents. Drain cleaners, furniture polishes, medicines, and some other items commonly found around the home are much more dangerous, and they account for the great bulk of the deaths and poisonings.

FDA has the power and authority to ban any detergent it finds so hazardous that a warning label would not make it safe for the home. So far FDA has not found need to use this authority. Malcolm Jensen, FDA's Director of Product Safety, told a Senate Commerce subcommittee that there "is no laundry detergent on the market so hazardous that labeling could not make it safe for home use." The main problem faced by his staff is that there are an awful lot of detergents, about 200, on the American market, and that the manufacturers, for some reason known only to themselves, are constantly changing the formulations. Most of the companies, however, inform FDA of the changes, and the agency believes that most of the potentially hazardous detergents have been properly labeled or removed from the market voluntarily. Nevertheless FDA continues to monitor five or six detergents on a regular basis each month. Asked about the Surgeon General's position, Jensen said flatly that he "would not have given the same advice."

The consumer can thus be fairly certain that whatever detergent he finds on a store shelf is relatively safe.

safety labels

Detergent manufacturers themselves, according to the Hazardous Substances Act, are responsible for putting appropriate cautionary labels on their products. The Food and Drug Administration monitors their compliance with the law and has authority to require additional labeling. Initially testing 39 detergents, FDA now monitors an additional five to six laundry products every month. When found necessary, one of six different labels are required according to the degree of potential hazard:

1. Caution, harmful if swallowed.
2. Caution, harmful if swallowed, eye irritant.
- 2A. Caution, eye irritant.
3. Warning, injurious to eyes, harmful if swallowed.
4. Warning, injurious to skin and eyes, harmful if swallowed.
5. Danger, may cause burns to skin and eyes, harmful if swallowed.

Of the 39 products tested first, 25 were found to require additional labeling, and 14 were found to be either safe without labels or already labeled properly. The individual results are as follows:

PRODUCT	PHOSPHATE CONTENT	LABEL
Safeway Detergent PAR	None	3
Montgomery Ward Lo-Suds	None	1
B-70	None	4
Crystal Clear	Yes	2
Concern	None	4
Amway SA8 (with phosphates)	Yes	2
Amway SA8 (without phosphates)	None	2
T-Rif	None	1
Pure Water	None	3
Giant	Yes	5
Phosphate Free Detergent	None	3
Klean	Yes	5
Miracle White	None	3
King Kullen Phosphate Free	None	3
Arm & Hammer Detergent	None	2
Basic L	None	3
Controll Phosphate Free	None	3
Burst	Yes	2A
Cascade	Yes	2
Dishwasher All	Yes	2
Tide XK	Yes	No Label
Drive	Yes	No Label
Phos-Free	None	No Label
Bio-D	None	3
Sears Non-Polluting Detergent	None	4
Fab Lemon Freshened with Borax	Yes	4
Breeze with Borax	Yes	2
All Temperature Cheer	Yes	2
Logic Phosphate-Free	None	4
Cold Water All	Low	2
Cold Power	Low	No Label
Ecolo-G	None	4
Triumph	None	3
Acme No-phosphate	None	4
Balance	None	5
Un-Polluter	None	3
Trend	None	2
PFD	None	4
Spring Clean	None	2

phosphate warning

The Federal Water Quality Administration published a list of detergents in 1970 that revealed the phosphate content of the various brands. Some were almost all phosphate; others had very little or none at all. Consumers, for the first time, were able to turn down "brighter than white" performance for environmental quality, and millions did. But on July 2, 1971, the Environmental Protection Agency announced it would no longer make this information available except in those instances in which companies voluntarily listed the phosphate content on the package. Now companies can more easily claim, as they always have, that consumers demand the cleaning power of phosphates—even though many phosphates have been proven to wash just as effectively.

The Federal Trade Commission, however, has proposed a rule that once again would give consumers more information before they have to choose. The rule would require that all ingredients, whether they be safe,

hazardous, or polluting, be listed on the package along with their percentage by weight. The rule would also require that all phosphate detergents be labeled as follows:

"WARNING. EACH RECOMMENDED USE LEVEL OF THIS PRODUCT CONTAINS _____ GRAMS OF PHOSPHORUS, WHICH CONTRIBUTES TO WATER POLLUTION. DO NOT USE IN EXCESS. IN SOFT WATER AREAS, USE OF PHOSPHATES IS NOT NECESSARY."

This warning would also have to be printed or broadcasted in all commercials. In public hearings before the commission and Congressional committees the Administration has consistently opposed this rule, but FTC is still weighing its final decision. It is believed that the commission's sentiment favors the rule, but to come out with it now will indeed be difficult. The rule could, however, begin to set our national policy back in the right direction.

Whatever brand he chooses should be kept away from children, especially if there is a warning, but there is no rational reason to avoid low or nonphosphate detergents. There *are* reasons to look for them. Eutrophication is a growing problem, and phosphorus has been identified as a main cause of this pollution. About 50 percent of all the phosphorus in our waters comes from detergents, and there are virtually no communities that have the kind of waste water treatment that can handle phosphates as long as we keep using phosphate detergents.

The tragedy of September 15, however, is that even increasing environmental awareness on the part of consumers may not be enough to save many lakes, freshwater estuaries and slow-moving streams unless the Nixon Administration changes its position, which, on the whole, seems to be to promote phosphate detergents. In spite of all the facts, the Administration line is that consumers should beware of nonphosphate detergents and that localities that have banned them should reconsider what they have done. By July 1, 1973, one-fifth of the nation's population will be living where phosphate detergents will be banned, if laws now on the books are upheld. The detergent companies, however, are strenuously challenging these laws. The government, having given the companies new ground to stand on, is even helping them in the legal struggle. In Dade County (Miami), Florida, for example, representatives of the government testified at a local hearing to the effect that the county's law banning phosphates was unwise.

Some have charged that these federal actions result from an undue influence inside the White House by the big three detergent makers. A top presidential aid, Bryce Harlow, recently left the Nixon Administration to reassume his previous job with Procter & Gamble. Another behind-the-scenes technician in the detergent drama was White House aide Charles Colson. According to the *Wall Street Journal*,

his "job involves doing favors for interest groups in return for getting favors from them. Thus, in White House councils Mr. Colson successfully argued the case of the detergent industry against limits on phosphates." Whatever the background of September 15, it is widely believed that both Russell Train and William Ruckelshaus have been forced to take public positions contrary to their personal views. Again according to the *Wall Street Journal*, Ruckelshaus has even "worked behind the scenes to counter Dr. Steinfeld's position." Nevertheless, Steinfeld still carries the day.

The real test of U.S. policy may be the international agreement on the problems of the Great Lakes that the United States and Canada had planned to sign at the end of 1971. Because eutrophication is a major problem for the Lakes, Jesse Steinfeld's advice, according to one official, has become "a major stumbling block." Canada already has put stringent regulations on the phosphate content of its detergents and now, understandably, is worried about the U.S. commitment. A draft agreement written by the Department of State is being held up in the White House Office of Management and Budget. Possibly there will be no agreement at all. If an agreement is reached but the problems of eutrophication are ignored or passed over lightly, the agreement itself may be worthless. Hopefully, the importance of the decision and the international impact it will have will convince the policymakers in the White House that the time to stop playing politics with eutrophication is now. ■

James Rathlesberger is a staff member of the League of Conservation Voters in Washington, D.C. He is currently preparing a book that will analyze the Nixon Administration's environmental policies and programs.



Scenic view from Lolo Trail with bear grass in foreground, Bitterroot Mountains in background.

Idaho's CLEARWATER COUNTRY

stephen f. arno

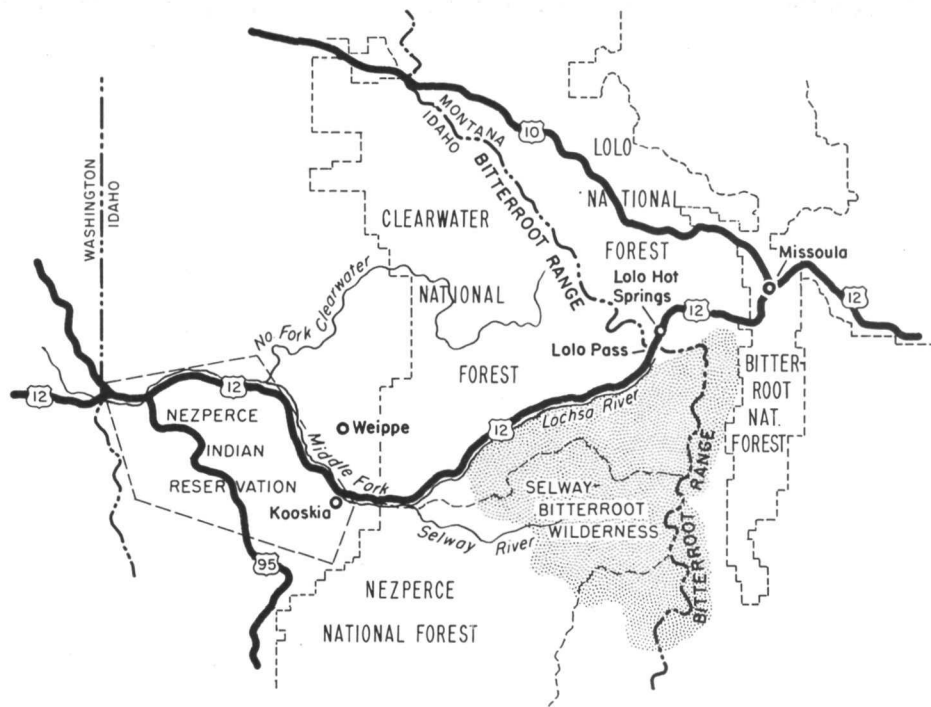
On their expedition to the Pacific in 1805 and during their return the following year, the explorers Lewis and Clark found that the Bitterroot Mountains of Idaho offered as great a challenge as any part of their journey. The explorers followed the Lolo Trail in this region, a route used by the Nez Percé Indians to reach buffalo country to the east in Montana. Had they not done so, the mountain crossing would have been even more difficult, perhaps dooming the expedition to failure.

It is not surprising that this rugged portion of Idaho was the last area along the Lewis and Clark Trail to feel the impact of civilization. As recently as 50 years ago hardly a dirt road penetrated the region, core of which lies in the modern 1.7-million-acre Clearwater National Forest. In 1962, however, it became possible for highway travelers to wind their way through the heavily timbered mountains of the Clearwater country over a paved highway connecting

northern Idaho with adjacent Montana—the scenic Lewis and Clark Highway, Route U.S. 12.

It is remarkable that even today, as a motorist penetrates Clearwater country on the Lewis and Clark Highway, he both sees and feels the wilderness. Here there are no curio shops, no roadside zoos, no vacation subdivisions, no billboards. Primeval forest starts at the highway's edge and stretches out over rocky ridge and valley for endless miles in all directions. This is a road that strikes one as an example of good highway engineering; one far removed from the extravagant concept of the American freeway. Here a smooth, adequate two-lane paved road winds gently but incessantly as it threads 89 miles of white-water rivers—the Middle Fork of the Clearwater and one of its principal tributaries, the Lochsa.

Lochsa, the Flathead Indians called it, meaning “rough water.” The Lochsa gushes along, its sparkling beauty



substantially unmarred by the road. Every 10 miles or so a rustic wood-and-cable suspension bridge for hikers and horsemen spans its foaming waters. These are the heads of trails that lead into the great Selway-Bitterroot Wilderness.

Both road and watercourse are lined alternately by towering western white pines and groves of somber cedars, rock-walled passages, and mountainsides clothed in colorful hardwood shrubs. Campsites, picnic areas, historical signs, and interpretive displays are carefully blended into the landscape. Gas stations, drive-ins, motels, gift shops, power lines, railroads, and towns—all are miraculously absent.

Lack of development here stems both from the newness of the highway and the fact that about 90 miles of the road's course lies inside the Clearwater and Lolo National Forests. However, the highway also passes through some tracts of private land near mile-high Lolo Pass on the Idaho-Montana divide and to the east in Montana's Lolo National Forest. On the west, the approach up the Middle Fork of the Clearwater traverses private farm and pasture land. Above Kooskia, Idaho, the Middle Fork and its sister tributaries, the Lochsa and Selway, are being included in the national wild river system.

A tributary enters Lochsa River.

STEPHEN ARNO



Lewis and Clark followed approximately the route of this highway westward in Montana up Lolo Creek to Lolo Pass. But, on what is now the Idaho side of the pass, they realized that the Lochsa could not be navigated or even followed on foot; so they traversed a high ridge north of the river. This meant leading horses with their heavy loads over tangles of fallen timber and through deep September snows. Finding no game, the tired, cold, wet, and discouraged explorers were forced to shoot some horses for food and to abandon others that had become too weak to travel. After several arduous days of march on the Nez Percé "buffalo road" from Montana the explorers finally came within sight of the easternmost Clearwater grasslands, Weippe Prairie. On September 19, 1805, Lewis wrote in his journal, "we to our inexpressible joy discovered a large tract of Prairie country lying to the S.W. . . ."

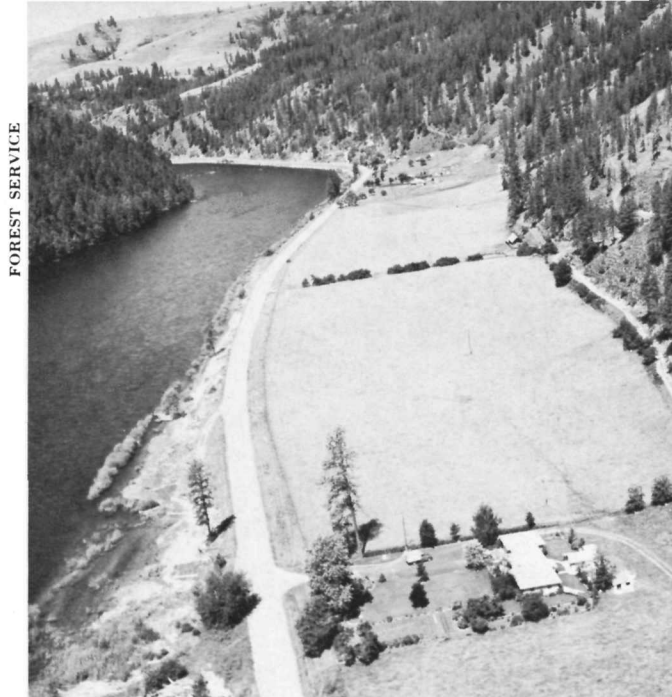
After wintering at the mouth of the Columbia River, Lewis and Clark started east, retracing their route over the Lolo Trail. After crossing Lolo Pass, the party enjoyed the luxury of hot baths at Lolo Hot Springs on June 29. The explorers were amused to watch their Nez Percé guides steep themselves in the steaming springs for as long as they could bear the heat, run to the banks of snow-fed Lolo Creek for a quick plunge, then scamper back to the hot springs.

The explorers found game scarce in the Clearwater country. Early trappers and prospectors in the region seldom saw signs of the Rocky Mountain elk; but, more than a century later, these large and hardy herbivores, known to the Indians as "wapiti," began to spread through the Clearwater country, perhaps migrating west from Montana. Elk populations swelled in the favorable new habitat to produce one of the nation's finest modern herds.

The great forest fires that ravaged many of the Clearwater canyons and ridges between 1910 and 1934 seem to have been largely responsible for today's abundance of elk. Although the mountains here receive abundant moisture on an annual basis—an average yearly precipitation of about 50 inches—the months of July, August, and September are often dry. Then, cumulous clouds swell and billow into great black thunderheads, and lightning often starts fires in the wilderness forest.

The Idaho fire of 1910, centered in Clearwater country, was the greatest forest fire ever recorded in the nation. Then, dozens of scattered lightning fires finally merged into a conflagration that blackened some 3 million acres of forest—an area more than twice the size of Delaware. So vast was the expanse of terrain burned that natural re-seeding of conifers did not readily occur. Instead, luxuriant stands of tall shrubs soon covered charred slopes. Dense tangles of Rocky Mountain maple, serviceberry, chokecherry, snowberry, mountain ash, elderberry, *Ceanothus*, and various other brushy plants replaced dense forests. (It is interesting to note that viable seeds of *Ceanothus* apparently may remain dormant in forest soil for 200 years before germination is triggered by removal of forest cover by fire.)

Populations of elk, mule deer, and possibly also black bear, moose, bighorn sheep, and mountain goat swelled in this part of Idaho in response to the new bounty of nutritious shrubbery, much of it covering winter range in canyons at lower elevations. Along the Lochsa section of the



Private land subject to development along the Middle Fork of the Clearwater.

Lewis and Clark Highway motorists may often see herds of elk in winter and spring, bellies dragging in 3 feet of snow as they munch the shrubbery. Mule deer, mountain goats, and an occasional moose also may be seen along the wilderness highway.

The science of ecology has contributed greatly in the past decade or so to man's understanding of the role of fire in maintaining open forests, preventing buildups of insects and diseases, and in assisting reproduction of certain species of trees like the sequoia, Douglas fir, and ponderosa pine. In addition to such effects, biologists have found that natural fire is instrumental in helping to provide ample food for wildlife.

Because great forest fires have been largely brought under control during the past half century, in the Clearwater country as elsewhere, much of the shrub legacy of natural forest fires has grown too tall to be reached by the large herbivores like elk; is old or decadent; or is being invaded by stands of conifers. In the past few years the Forest Service has commenced on a limited scale the controlled use of fire in some of the older shrublands of the Lochsa drainage to allow resprouting of shrubs and improvement of habitat for large mammals.

The cougar, coyote, bobcat, golden and bald eagle, and osprey also are inhabitants of the wild Clearwater country. River otters bob like swimming dogs in the waters of the Middle Fork and the Selway. All these residents take their traditional shares of the trout crop, which is highlighted by fall and spring runs of steelhead. These ocean-going rainbow trout migrate up the Columbia, Snake, and Clearwater Rivers and their tributaries to spawn in the very

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places they were hatched. They have been greatly depleted in most of their former waterways east of the Cascade Mountains by the system of hydropower dams that has converted most of the Columbia River system into a chain of artificial lakes. Thus, the free-flowing Middle Fork and its steelhead runs add yet another dimension of interest to Clearwater country.

The most casual motorist must be impressed by the sweeping corridors of cool greenery along the Lewis and Clark Highway. Moisture-laden storms sweep inland from the North Pacific dumping large amounts of precipitation on mountain barriers of northern Idaho. These copious rains and snows in fall, winter, and spring help the region support the most luxuriant forest found in the Rocky Mountains.

The Pacific Coast conifers that need ample water spread far inland only in this region of the Rockies. A western red cedar anchored in the Clearwater drainage has a giant fluted butt more than 16 feet in diameter. Dark, straight boles hoist white pine crowns 150 feet or more into the pure, damp air; 10-inch cones dangle from the tips of high limbs. Western larch, a deciduous conifer and world's largest "tamarack," sends slender reddish trunks higher than those of the pines.

The sky-scraping tamaracks are imposing in their fall tones of gold. Mountainsides of hardwood brush compete with the tamaracks, but in various hues. Equally splendid is the winter scene, when conifers are smothered in snow. Then, 10- to 20-foot icicles hang from cliffs, and rivers churn through pack ice several feet thick. Spring brings hillsides of cream-colored oceanspray and chokecherry; waterfalls plunge over cliffs, spotted fawns tag along with mother mule deer, and nature puts on her best display of Pacific dogwood. The only known groves of this tree east of the Cascades are found along the lower Lochsa River.

The country traversed by Idaho's "wilderness highway" is rich in human and natural history. There were, for example, the 700 Nez Percé, mainly women and children, who fought valiantly under Chief Joseph to remain in their homeland, and who fled over the Lolo Trail toward Montana and Canada in 1877 to escape the U.S. Army. Today

in the Clearwater country there is a Nez Percé National Historical Park that includes 22 historic sites. There were gold-mining boom-towns, and miners snowed into the Clearwater country all winter by 10-foot drifts. In later years there was also the "Ridgerunner," a fugitive who lived for 13 years in the backcountry, largely on what he could steal from Forest Service cabins, to be finally captured in 1945. There is the history of forest rangers, firefighters, and trail-builders; the extermination of the wolf and grizzly bear; logging past and present.

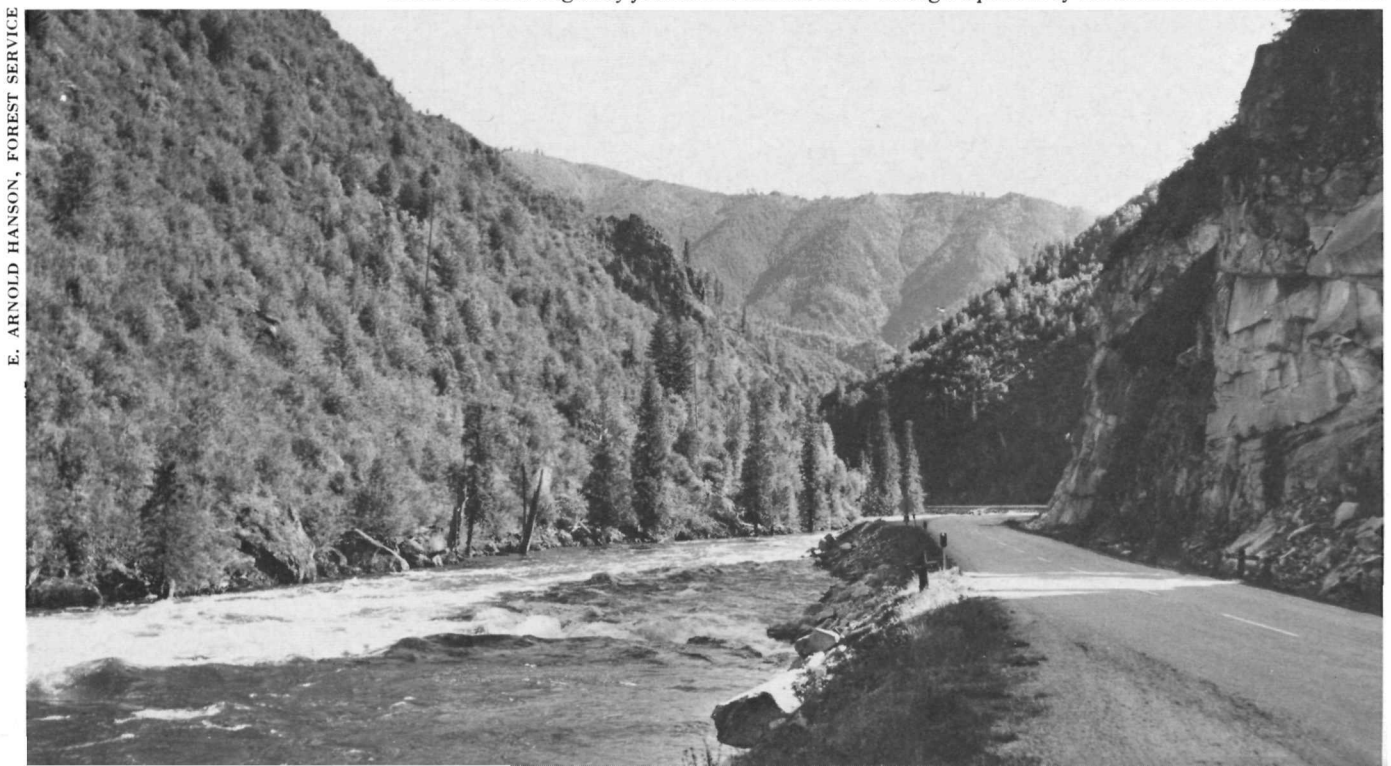
Management objectives of the Forest Service to limit development and to have it blend with a scenic and primitive river and canyon environment are most commendable. However, in spite of the Service's program for its own lands, classification of the Middle Fork of the Clearwater in the wild and scenic rivers system, and present good condition of the region, strong support and pressure from the public will be necessary to outweigh inevitable pressures from commercial development, exploitation, more campgrounds and facilities, and a "bigger and better road."

These pressures will be particularly severe in the privately owned lands along the Lewis and Clark Highway. Vacation homes and commercial graffiti already are popping up in the pastoral setting along the Middle Fork. Scenic easements and the money to pay for them will be needed soon for the control of commercial development, lumbering, billboards, and the general clutter of the highway outside national forest lands.

One example of a commendable cooperative effort toward protection of this splendid wild landscape has been the underground placement of a power line, by a public utilities company, over Lolo Pass from Montana to the Lochsa Lodge and the Powell Ranger Station. The project involved some 20 miles of underground cable.

Good planning like this, and vigilance on the part of the conservationist public, will help to insure that Idaho's wilderness highway will not itself pass into history, to become just another congested road. ■

Lewis & Clark Highway follows the Lochsa River through a portion of the Clearwater National Forest.



NPCA at work

Endangered species The International Union for the Conservation of Nature and Natural Resources, of which the National Parks and Conservation Association was a founding member in 1948, has been drafting a convention on rare and endangered species of plants and animals for presentation at this year's March or April international meeting on the matter in Washington, and later at the United Nations Conference on the Human Environment at Stockholm. The U.S. government has been formulating its recommendations through the secretaries of the Interior and State departments, and both agencies have invited this Association to comment on the IUCN's draft document, titled *Convention on the Export, Import, and Transit of Certain Species of Wild Animals and Plants*. The Association's comments on the lengthy draft document necessarily have gone into considerable detail and only the most important points can be mentioned here.

The Association found that the draft document contains several major weaknesses, and recommended substitute language to remedy them.

One of the most serious of the weaknesses seems to be the failure of the proposed convention to define the term "endangered species." This Association has, therefore, formulated and recommended the following definition:

"'Endangered species' shall denote the status of any plant or animal species the ecological vitality of which is becoming threatened due to any one or combination of the following factors: hunting; commercial exploitation; loss of habitat; pollution; other adverse environmental influences. Endangered shall include 'rare.' Among the indicators to be considered in determining the status of a species are the following: significant population decline; significant decrease in recruitment; significant modification of age distribution within the subject population." The term species is defined by the Association as denoting a species, subspecies, race, or substantially ecologically or reproductively isolated animal or plant population.

A second major weakness of the present draft of the convention, in the Association's view, concerns a fundamental protective principle. As proposed, full protection in the form of import and export permit requirements would be accorded a species only if it were "threatened with worldwide extinction." Such language is too restrictive, the Association pointed out; all endangered species, as defined above, should be fully protected. Under the Association's definition of a "species," the requirement that a plant or animal be "threatened with worldwide extinction" is removed.

Today there is an urgent need, the Association commented, to address the socioeconomic effects of wildlife and other environmental protection efforts. In this respect the draft convention also falls far short—first in its proposed maintenance of a "double standard" of indexing endangered species, and second in its failure to secure universal participation in the convention. "We suggest," said the Association, "that the world community recognize the value of endangered species and provide for compensation

of an individual state where such state is economically or otherwise dependent upon the exploitation of such species. An individual state may simply be unable to afford to forego economic, social or political benefits of exploitation without assistance in some form from the world community."

An Endangered Species Commission should be established, the Association recommended, to distribute the cost of preserving endangered species on an equitable basis within the world community which derives benefit from their preservation.

Endrin and Compound 1080 The Association has written the Chief of the U.S. Forest Service, Edward P. Cliff, protesting both the Service's use of the pesticide endrin in direct forestry seeding operations and its use of baits treated with Compound 1080 (sodium monofluoroacetate) in attempts to control or eliminate rodents. Such practices, the Association said, are destructive, dangerous, and probably presently illegal under terms of the National Environmental Policy Act of 1969 which, as interpreted in numerous recent decisions, require an environmental impact statement for their continuance. So far as can be determined, the Association said, no such impact statement has been filed on these matters.

The Association pointed out in its letter that the chlorinated hydrocarbon known as endrin is extremely toxic to aquatic organisms, birds, and mammals, with a toxicity that is cumulative in moderate to high degree; and that Compound 1080 not only kills rodents as primary targets but also many carnivorous and omnivorous birds and mammals by secondary poisoning. "In the matter of Compound 1080 and endrin," the Association said, "we . . . remain unalterably opposed to their general use."

Chlordane and heptachlor The Environmental Protection Agency has initiated an extensive review of its registration of products containing the chlorinated hydrocarbon pesticides chlordane and heptachlor, and by way of the *Federal Register* has invited the views and comments of interested parties. The two chemicals commonly are used for control of insects of the soil and of plant foliage, in household pest control, and in lawn management; both are persistent in the environment and both are capable of significant biological concentration in certain forms of animal life, some of which are eventually consumed by people.

In its comments on the matter the Association urged more severe restrictions on both chemicals, saying that the result of much experimental work has shown that, as presently used, both are dangerous to public and environment alike. The Association was particularly critical of current household and lawn use of the two pesticides by people wholly unaware of their dangers. Beyond this there should be a strict ban on the two broad-spectrum pesticides in soil or foliage insect control work because of their persistence and concentration by animals along various



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steps of the natural food chain. All other uses of the two chemicals also should be terminated, the Association said, unless users are licensed, trained, and certified as qualified; in any case, the use of chlordane and heptachlor should be allowed only when no narrow-spectrum and less persistent substitutes are available.

Wildlife refuge The Congress has had under consideration a measure that would create a new wildlife refuge—the San Francisco Bay National Wildlife Refuge—of 21,662 acres (plus a thousand-acre buffer zone) along the southern shores of San Francisco Bay. In response to an invitation of the House Committee on Merchant Marine and Fisheries, whose Subcommittee on Fisheries and Wildlife recently took public testimony on the matter in Washington, the National Parks and Conservation Association indicated its full support for the idea.

Such a refuge, the Association said, would provide and protect habitat for the aquatic animals and birds of that part of the Bay, and would in addition constitute a source of enjoyment and outdoor recreation for the myriad people of the Bay region. Maintenance of such a large unspoiled tract also would be helpful in preventing further pollution and environmental degradation of that part of the Bay, it was noted. NPCA suggested a small change in the language of the measure (HR 111) to help insure sufficient funds for the completion of the refuge, which would take several years as outlined in the bill.

Cats and polar bear The Association has written Secretary of the Interior Rogers C. B. Morton on two matters pertaining to endangered or potentially endangered mammals—the wild cats of the world, and the polar bear. It expressed deep concern that the animals have not been included on

the official list of endangered species and that they receive no protection under the federal Endangered Species Act. New and positive action is needed in the Interior Department, the Association said.

In the case of the world's cats, leading experts at a recent international symposium on the ecology, behavior, and conservation of the animals concluded that imports into the United States of all cats should be halted, and it was the consensus of the symposium that the federal government should take action in this direction. In its letter to the Secretary the Association said it could not understand why no action had been forthcoming, and requested "that you give these animals protection under the Endangered Species Act in an attempt to halt legal and illegal commercial exploitation . . . by closing United States markets for their pelts."

Concerning polar bears, whose present population may be as low as 10,000, the Association noted that between 1966 and 1969 age-ratios in Alaskan kills dropped, suggesting that the animals are being overhunted. This and other evidence indicate that the polar bear may be on its way toward extinction, the Association said, in urging that the mammal be protected under the Endangered Species Act.

Refuge wilderness Interior's Bureau of Sports Fisheries and Wildlife has plans for a 17,116-acre wilderness in the Havasu National Wildlife Refuge, the three units of which are spotted along the Colorado River roughly from Needles, California, to near the Parker dam, some 45 miles south. Of the three units only Topock Gorge in the Mohave Canyon reach of the river seems to qualify as wilderness, and the Bureau has included nearly the entire unit in its recommendation.

This Association has commended the Bureau on its proposed Needles Wilder-

A CITIZEN'S VOICE IN GOVERNMENT

Organizations like the National Parks & Conservation Association, which enjoy special privileges of tax exemption, may not advocate or oppose legislation to any substantial extent.

Individual citizens of a democracy, however, enjoy the right and share the responsibility of participating in the legislative process. One of the ways citizens of a democracy can take part in their government at state and federal levels is by keeping in touch with their representatives in the legislature; by writing, telegraphing, or telephoning their views; by visiting and talking with their representatives in the national capital or in the home town between sessions. Every American has two senators and one congressman with whom he may keep contact in this manner.

The best source of information for such purposes is the official *Congressional Directory*, which can be bought through the Government Printing Office, Washington, D.C. 20402, at the price of \$5.50. It tells you who your senators and congressmen are and lists the membership of the various Congressional committees. It also gives full information on the personnel of the various executive bureaus of the government whom one may contact about administrative programs and policies.

ness, as the area would be known, in invited testimony at a public hearing on the matter. However, several changes in the plan were recommended. Mining activities in the wilderness ought to be phased out as soon as possible as being incompatible with the area's purposes, the Association said. Wilderness boundaries closest to the river should be extended to mean water level to insure the integrity of lands adjacent to the river, and to protect waterfowl habitat. And finally, the Association recommended that the Bureau, in consultation with the Bureau of Reclamation, should try to obtain wild river status for the reach of the Colorado within the proposed wilderness as a guarantee of firm protection for river environment in the wilderness. The Association's views were presented by Robert Lee Coshland, an NPCA correspondent living in Tucson, Arizona.

The Bureau also has studied the Chassahowitzka Wildlife Refuge, in Citrus and Hernando counties on the west coast of Florida, and has recommended against wilderness status for any part of it. The Association has not agreed with this assessment. In invited testimony on the matter during November, NPCA gave full support to a proposal of the Florida Defenders of the Environment for a 25,000-acre modified wilderness (because of temporary but recurring intrusions of airboats and motorboats) in Chassahowitzka. Wilderness of any kind in Florida will be at a premium, it was pointed out, and the refuge ought to be considered in this context. The additional protection afforded the refuge by a large wilderness would be highly beneficial to a number of species of animals, the Association said, including some presently carried on the Bureau's own list as endangered, such as the Florida manatee (sea cow) and the American alligator.

Park wilderness Two of the great units of the park system—both in terms of size and of wilderness quality—have been under National Park Service consideration for wilderness purposes. The two are Glacier Bay and Katmai monuments in Alaska; and the Service recently held public hearings on its wilderness and master plans for both. Views of the National Parks and Conservation Association on plans for the two units were presented by Mrs. Mark Ganopole, resident of Anchorage, Alaska, and a trustee of the Association.

The Association commended the Service on its general planning for both Glacier Bay and Katmai. At Glacier Bay the Service has included nearly all of the huge reserve in its wilderness proposal—2,210,600 of the monument's 2,274,595 acres. The Service has recommended that the area be redesignated a national park, on which point the Association expressed its

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unqualified agreement. Actually, both Service and conservationists long have been in agreement that the area should be a park; but the matters of certain mining claims and mineral entry rights have been bothersome ever since establishment of the monument. So far as present planning is concerned, the Association suggested that it would be possible for the Service to designate its wilderness and then recommend acquisition of lands affected by mining claims.

The Service's plans for visitor accommodations outside the monument were also commended. It was suggested, however, that a public water transportation system for the upper Glacier Bay area would be preferable to use of small private motorboats to avoid a pollution problem so far as possible and also to insure visitor safety in the highly unpredictable weather of the monument.

In its comments on Service plans for Katmai Monument the Association said that Park Service wilderness and master plans again recognize the crucial need for getting as much acreage as possible under protection. NPCA felt, however, that certain additional acreages might well be added to the plan—the Bay of Islands in particular, which the Service now sees as a general outdoor recreation area.

Service plans for public rather than private transportation in the monument were commended. The now-familiar proposal for an eighth-mile buffer zone between wilderness and nonwilderness was, however, recommended for elimination. The Association suggested that here, as in other units, the best protection for wilderness lands behind the zone would be complete exclusion of nonwilderness uses in the buffer zone itself, and inclusion of the zone as wilderness.

conservation news

Two new parks As the curtain closed on 1971 the National Park Service found itself with two more national parks—and two less national monuments. Arches and Capitol Reef, in the wild and colorful sandstone country of southern Utah, have been elevated from the status of national monument to that of national park.

In the same general region and at nearly the same time, already existing Canyonlands National Park was increased very substantially in size by some most worthy additions of adjacent lands. Now Canyonlands is a park of some 350,000 acres, plus a 3,200-acre detached unit several miles from its northwestern corner that will protect part of a highly scenic canyon containing relics of prehistoric southwestern man. The new size of the park may be compared with the 258,000 acres authorized for establishment in 1964. (The Park Service's plan at that time called for about 330,000 acres.)

During its transformation into a national park, however, former Arches Monument lost some 10,000 of its 83,000 acres. This latter figure had obtained since 1969, when the original monument was greatly enlarged by Presidential proclamation.

As a park Capitol Reef, also substantially enlarged in 1969, remains about the same size but has acquired some potential power-transmission line easements for the proliferating generating plants of the Four Corners region.

Woven into the background of this burst of park activity in southern Utah, as the recent record shows, are several discernible threads. One is the magic of the name "national park," with its fascination for the

out-of-doors American and his money. Most conservationists probably would take an understanding position on this point; and it is not likely, either, that they would spend much time quibbling about park status for the two areas. Both are superlative in their scenery and human and natural history interests, and in their magnificent wilderness qualities.

A second thread easily followed leads to a matter of greater concern to environmentalists—that of future roadbuilding in the region, both inside and outside the parks. In this connection the Secretary of the Interior has been charged with a road study and report to determine and recommend what roads are necessary for the "full utilization" of the new parks. Still another thread concerns the prospects for considerable development in the parks themselves.

Thus, if the new year brought the Park Service some new parks, it also brought conservationists and environmentalists some new food for thought and study in the red-rock country of Utah.

Parks meetings The Fourth Latin American Meeting on National Parks took place in Medellin, Colombia, October 4th to 8th of the year just past, and was well attended by representatives of the Latin American nations, the European countries, and the United States. Also in attendance were many young professional people and students from Latin American nations, all of whom took the most serious interest in the business under discussion—the saving of land for scientific, esthetic, and protective purposes.

In every Latin American country represented at the meeting both governmental and private organizations reported that they were planning to protect representative samples of native ecosystems in parks or their equivalents; discussions centered on the question of how best these aims could be accomplished rather than whether they ought to be accomplished.

Coincidentally with the Fourth Meeting, the First Latin American Exposition on National Parks was held, formally opened by Dr. Fernando Ruan-Ruan, general director of the National Institute for the Development of the Renewable Natural Resources of Colombia, which includes the section for National Parks and Wildlife.

On billboards Association members who are in a geographical position to do so may wish to attend a conference and panel discussion at the Smithsonian Institution's Museum of Natural History auditorium in Washington, D.C., February 8th from 10 a.m. to 12:30 p.m., on "Less Billboards—More View." The event is sponsored by the Conservation Committee of the Garden Club of America.

Panelists for the occasion, and their topics, will be: Michael Barker, of the American Institute of Architects, on "Perception, Aesthetics, and Roadside Graphics"; Lloyd Tupling, of the Sierra Club, on the "Role of Conservation Organizations in Billboard Control"; Secretary of Transportation John A. Volpe (or Assistant Secretary Herbert F. DeSimone) on "What Is Government Doing to Fund the 1965 Highway Beautification Act"; Mrs. John T. Wainwright, a commissioner of the City of Miami, on "The Importance of City or Local Billboard Ordinances"; Elbert G. Moulton, of the Vermont Department of Development, on "Alternatives to Billboards"; and Spencer M. Smith, Jr., of the Citizens Committee on Natural Resources, on "The Citizens View."

Conservation volunteers Summer volunteer positions with the National Park Service and the U.S. Forest Service are available through a program of the Student Conservation Association. High school students over 16 years old and college undergraduates and graduates may apply for a variety of openings. For information and applications write to Student Conservation Association, Olympic View Drive, Route 1, Box 573A, Vashon, Washington 98070, by Feb. 15 for best chance of selection.



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conservation docket

EVERY CONGRESS CONSIDERS hundreds of measures bearing on conservation and environmental matters. It is not possible to list all such bills in the Conservation Docket, so some selectivity must be exercised. The bills presented below, with their Senate (S) or House of Representatives (HR) numbers, have not been noticed previously in this column unless a specific action is mentioned. Members of this Association, as citizens, are free to write to the committees to request that they be placed on notification lists when bills come up for public hearing. When notified of hearings, they can ask to testify or they can submit statements for the hearing record. To obtain copies of bills, write to the Senate Documents Room, U.S. Capitol, Washington, D.C. 20510, or to the House Documents Room, U.S. Capitol, Washington, D.C. 20515. When requesting bills, enclose a self-addressed label.

National park, monument, historic site, or recreation area legislation introduced and referred to House or Senate Interior and Insular Affairs committees, or which has been acted upon otherwise, has included:

PARK: HR 12034, to establish a Big Thicket National Park in southeastern Texas.

PARK: S 29, to establish the Capitol Reef National Park, presently Capitol Reef National Monument, in southern Utah: cleared for Presidential signature, and signed by the President December 18, 1971.

PARK: S 2601, to provide for increases in appropriation ceilings and boundary changes in certain units of the national park system; passed by Senate and cleared for House.

PARK: HR 7088, providing for establishment of a Tinicum National Urban Park in Pennsylvania; approved for full House Interior and Insular Affairs Committee action.

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HISTORIC SITE: HR 12082 and S 2954, to authorize establishment of the Knife River Indian Villages National Historic Site at the confluence of the Knife and Missouri rivers near Stanton, North Dakota, including the Buck Fork site, Amahani Villages, and Lower and Bigger Hidatsa sites.

RECREATION AREA: S 36, providing for establishment of the Connecticut River National Recreation Area in New England; passed by the Senate.

RECREATION AREA: S 2997, establishing the Cougar Lakes National Recreation Area and to provide for a study of the Mount Aix and surrounding lands in Washington as wilderness.

RECREATION AREA: S 1977, to establish an Oregon Dunes National Recreation Area on the coast of Oregon; passed the Senate.

NATIONAL SEASHORE: S 2992, establishing a Guam National Seashore on the Island of Guam.

NATIONAL RIVER: S 7, providing for establishment of the Buffalo National River in Arkansas, passed by Senate with an amendment and cleared for House.

Measures recently introduced on fish and wildlife matters have been:

HORSES & BURROS: S 1116, requiring the protection, management, and control of wild free-roaming horses and burros; cleared for Presidential signature after the Senate agreed to a House-Senate conference report. Signed by the President December 18.

ATLANTIC SALMON: S 2191, to amend the Act of 1954 commonly known as the Fisherman's Protective Act to conserve and protect Atlantic salmon of North American origin; ordered favorably reported by the Senate Committee on Commerce.

WILDLIFE PROJECTS: HR 11091, to provide additional funds for certain wildlife restoration projects; approved for full committee action by subcommittee of the House Merchant Marine Committee.

BALD EAGLES: HR 10450, to strengthen the penalties imposed for violation of the Bald Eagle Protection Act; replaced by a clean bill (bill without amendments), which was approved for full Merchant Marine and Fisheries Committee consideration.

MIGRATORY BIRDS: HR 701, to amend the Migratory Bird Hunting Stamp Act of 1934 to authorize the Secretary of the Interior to increase in his discretion the stamp fee from \$3 to \$5; passed by the Senate and signed by the President Dec. 22, 1971.

OCEAN MAMMALS: HR 10420, calling for the managed protection of sea mammals; failed to obtain the necessary two-thirds majority on the House floor under suspension of the rules, which allows of no amendments.

Other bills of general interest to the con-

servation world on which recent action has been taken are:

NATIVE CLAIMS: HR 10367, providing for settlement of land claims of Alaskan natives; cleared for Presidential signature after Senate agreed to a House-Senate conference report. Signed Dec. 18, 1971.

RECLAMATION ACTS: S 1026, providing for coverage of the entire United States by terms of the reclamation acts, as amended; signed into law by the President November 24, 1971.

WATER RESOURCES: HR 10203, to amend the Water Resources Research Act of 1964 to increase the authorization for water resources research and institutes; signed into public law by the President December 2, 1971.

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Continued from page 2

been denied, that much of the oil is intended for Japan; what then is the urgency in respect to national defense? If an export balance is what is meant, agricultural commodities or manufactured goods might serve our purposes better, and conserve irreplaceable resources.

DOMESTIC MARKETS are also involved, with tug-of-war apparently going on to get the oil shipped by super-tankers through the Arctic to the East Coast, or overland by pipeline to Chicago, or by pipeline or tanker to the West Coast. We trust that the Statement will analyze these alternatives convincingly and with great care in the national interest.

We hope it may also present some cogent analyses of the availability of other sources of energy. Many students of these matters think that petroleum resources, particularly domestic resources, including Alaska, should be conserved for emergencies, and for the long range benefit of the human race. It might turn out, for example, that over the distant future, petroleum reserves would be needed mainly for lubrication purposes, and not as fuels.

AVAILABLE, coming along rapidly behind the non-breeder fission power plants, will be the breeder plants, and perhaps more rapidly than supposed, the fusion process, or possibly a sharp swing toward solar energy within recent new perspectives. Sharp cutbacks in petroleum consumption may be impending.

The demand for oil might be very sharply curtailed if the automobile industry were to go over to electric cars, or to gas as a fuel, and a number of such alternatives are available. The persistent pollution of the air of our cities and our seaboard by the internal combustion engine has reached a breaking point; something will have to be done, and rapidly. The projections of a continually expanding demand for petroleum could be highly unrealistic.

IN ANY EVENT, we hope that the revised Impact Statement will deal with such questions as these very thoroughly. If it does not do so, it will obvi-

ously be hopelessly inadequate, and will be open to attack in court and in Congress.

The essential thing is to get the entire subject matter out on the table at full-scale public hearings before an impartial agency. The Department of Interior is not entitled to sit as judge and jury in its own case in this matter. The CEQ has a duty to the public to hold these hearings itself. Encona has taken this position in public communications addressed to the CEQ, and has asked President Nixon to reconfirm the authority of the CEQ to follow that procedure. A failure to assume these responsibilities might well touch off Congressional investigations, and indeed new legislation requiring the CEQ to shoulder these duties in such cases in the future.

WE ARE NOT QUIBBLING about minor matters. We are talking about the right of the public to have complete information on a major development project involving serious environmental impacts; about opportunity to examine a major Impact Statement and to oppose the action it recommends if necessary; about the need for a focal point within the Government of the United States to which public-interest environmental organizations can turn; and perhaps even about the need for a public defender to espouse the cause of the American people as a whole in such proceedings.

We are dealing with questions of the survival of human life, indeed all life on earth. How the Government of the United States deals with the Alaskan Pipeline issue may be an index, for better or worse, of the eventual outcome of the human effort to survive.

—Anthony Wayne Smith

Please help us get public hearings on the proposed Alaskan Pipeline! Public hearings should be held by the Council on Environmental Quality when the revised Impact Statement on the Trans-Alaska Pipeline is issued by the Department of the Interior. The Environmental Coalition for North America has asked CEQ to do so and has urged the President to reconfirm its authority in the matter. We need the help of our readers and all good conservationists. Please write to the President, The White House, Washington, D.C. 20500, asking him to have CEQ hold full-scale public hearings on the proposed Alaskan Pipeline.



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