

KILLERS CAPTURED—Dr. Cal Massey notes tiny black Southwest pine beetles captured in a screen, funnel and jar trap in a research plot on a mesa below Los Alamos. The white spot on the tree trunk is a hatchet slash where the date the beetles entered is noted. From such traps, Massey has

learned the tiny beetles raise a new family about every six weeks, lay about 60 eggs, and can kill a ponderosa pine in a matter of days. The huge pine, probably some 250 years old, was killed in about two weeks, at the same time serving as the hatching grounds for a swarm of young beetles.

Forests Threatened By Beetle Invasion

By TONY HILLERMAN

Two species of bark beetles, working as a deadly team, are stripping a vast area of Northern New Mexico of its pinon and ponderosa pine.

Dr. Cal Massey of the Forest Insects Division of the Rocky Mountain Forest and Range Experiment Laboratory, estimates approximately a million acres of trees are already dead or currently being killed. From Santa Fe, the area of dead and dying trees extends northward more than halfway to Taos, southward to the Albuquerque area, east almost to Las Vegas and westward up to the higher slopes of the Jemez mountains around Los Alamos. The beetles are the Ipslecontei (Arizona pine engraver), known as "Ips," and Dendroctonus Barberi (Southwest pine beetle), known as Barberi.

Massey said the Barberi beetles alone killed 195 million board feet of lumber in Arizona and New Mexico last year, with losses ex-

Santa Fe area property owners who want to save their pinon trees from the fast-spreading beetle plague have this advice from Dr. Cal Massey, entomologist of the Forest Insects Division of the Rocky Mountain Forest and Range Experiment Station:

"Keep the trees you want to save healthy—and that requires plenty of watering as long as dry weather continues.

"Tree owners could also spray the trunks with a DDT solution, such as we are doing at Bandelier National Monument. We can't be sure as yet that the poison will prove completely effective."

tending into the Gila area and the Prescott National Forest of Arizona as well as Northern New Mexico.

"I'm afraid losses are running considerably higher this year," he added.

Leon Hill, forester with the U. S. Forest Service's Santa Fe office, estimated that a half-

(Continued on Page Three)

'Oversight' To Cost State Welfare Fund Some \$450,000

SANTA FE, June 22 (UP)—An apparent oversight by the 1957 Legislature will cost the State Welfare Department about \$450,000 from June revenues, Assistant Welfare Director C. J. Woodard said today.

The oversight, Woodard said, was in the lawmakers' not making several bills de-earmarking funds effective July 1 instead of June 7.

"Now," he said, "the revenues we were depending on from June 7 to July 1 will go to the general fund instead of to the department."

"The Legislature apparently counted on our having these revenues when they made out our budget, but the lack of a July 1 effective date takes them away from us."

Woodard said the department's estimated half-million dollar surplus at the end of fiscal year 1956-59 probably will be "wiped out" because of the loss of earmarked funds.

He said he did not know if the revenue drop would force any lowering of welfare payments, but added "it's an indication at least that something will have to be done to tighten eligibility requirements."

"It's a little early to say in what areas eligibility requirements will have to be tightened, if they are," he said. "Besides the board will have to do that."

"But my guess is that they will be primarily in the aid to dependent children category."

He said he doubted if aid to the aged or blind "will be affected to any great extent."

He predicted that the Welfare Board, which will get the problem at its next meeting, will take quick action.

"The sooner they act," Woodard said, "the less drastic action will have to be taken. The tighter eligibility requirements or pay drops or whatever they decide on can be spread out over the full 24 months of the budget that way."

"But if they postpone action, it's going to spread these things over a lesser period of time and they will have to be more drastic."

SPECIAL NOTICE

New classified advertising deadlines effective Monday, June 24:

OBITUARY 9 A.M.

KILL ADS 8:30 A.M.

said some action will be taken by the commission. The executive secretary of the commission is attending a series of meetings in Philadelphia. The NEMA spokesman said it would take two or three weeks before action on the petition is taken. However, he said that a committee appointed by the commission will probe the situation. The committee will act as a "fact group," the spokesman said.

On May 15, Ward, rector of the education whose contract was renewed, wrote the NEMA secretary complaining the board's failure to contract. He wrote, in "Last night, May 15, I read in the evening paper was one of several contracts with the City School not be renewed by the Education. I had no formed at any time such change was known that my work for 12 years as director of any education had been satisfactory."

"I understand that the intendent was notified the day and that he contacted me but I was aw business so that I had notice."

"I went to the board being held that night. It seemed that such action to be taken I asked the chair refused to me, hurriedly called and then adjourned."

"I ask for an investigation of the NEMA to see if those summarily dismissed be protected and if favorable situation created in the future."

The board of education those officials' contracts were not renewed board's action in effect dated May 27. In the the board chairman, Linares, stated that the portion of salaries 1956-57 contracts would be a "lump sum."

Mrs. Leila Rawls, the NEMA's person commission, was on Saturday night and she and the executive the NEMA are not return for several NEMA spokesman said if anything will be delayed in regard to investigation.

PECOS PROJECT WASHINGTON (UP)—authorize construction on the Pecos River in has been approved by Interior Committee. Involves clearing of sand dredging of a channel \$3,000,000. It would increase of 24,500 acre annually to New Texas.

Santa Fe New Mexican

June 23, 1957

Thousands N.M. Forests Threatened by 'Costs' By Invasion Of Beetles

(Continued from Page One)

ist. Judge Fred J. Federici, of on, however, discussed the ject at length.

"In poor counties, like Taos, have a standard judgment and nence in drunk driving cases: days suspended on two con- tions . . . and \$200 court sts," Federici said. "I never ll it a fine."

Federici noted that the statutory mill assessment on property uation in Taos for the court d frequently does not provide ough money for criminal jury ms.

asked what statutory authority re was for assessing such ts, Federici answered:

"That's a question that's been ued for 20 years."

Legal observers state four prin- al objections to the costs in u of fines procedure:

1. The Constitution clearly in- ended fine revenue for school offers. Where no fines are as- sed and costs are used with e effect of a fine, no money es to schools.

2. The sliding scale of the cost recedure—up or down at the ill of the judge—denies the of- nder of the equal protection l the laws. In local cases, most- rnk drivers are assessed \$100 ts, but one who attempted to e to the judge was nicked for 150 costs.

3. If any sum can be assessed s costs, there is nothing to revent the levy of a fine, too. In drunk driving: \$100 to \$1,000 or the first offense.)

4. It's against the law be- ause there is no law to sup- ert heavy costs.

These alternatives to the court sts gimmick exist:

1. A loan or a grant can be obtained from state emergency nds when a county court fund its bottom.

2. The State Tax Commission an order the enforcement of a tute that's been on the books r years and which provides for p to a one mill statewide levy n property valuations. The law rovides money thus raised be ade available to court funds as eeded.

3. Judges can go to the legisla- ure and get statutory authority or increased criminal court costs.

Meanwhile, if the convicted drunk driver finds the court cost assessment too steep, a state tute says he need only spend 30 days in jail to wipe the bill off the books—whether it be \$5 or \$5,000.

Or, if he's a real hero, he can wait until the cost assessment is down in black and white, and then refuse to pay it.

It would be an interesting test ase.

million board feet of timber is being destroyed along the cir- cular drive from Santa Fe through Hyde Park and down through Pacheco Canyon to Te- suque.

Both are known as "non-aggres- sive" insects, which attack only trees in a weakened condition. They stay away from healthy trees because they are repelled by the pitch.

The Ips, a black bug about the size of a matchhead with a square tail, attacks only small trees, concentrating on pinon and seed- ling pine. The Barberi, also black but no larger than a grain of rice, attacks only larger trees and concentrates on mature pon- derosa pine.

The combined attack is killing virtually every pine, large and small, for miles around Bandelier National Monument.

Massey said the ravaging bee- tle attack was set off by the long drought, which weakened trees to the point where they can no longer produce enough pitch to expell the insects bor- ing through their bark.

"The beetles have always been here. They were located and iden- tified as far back as 1909 by one of the first etomologists working in this area," Massey said.

"But normally, when the for- ests are getting enough rainfall to be vigorous, the beetles are rela- tively scarce—living off of trees which have become over-mature, damaged or weakened in some way. Now, just about all of them at lower elevations are weak."

The entomologist said the For- est Service as yet has found no practical method of controlling the insects.

Last winter every infected tree was carefully removed from one big section of forest below Los Alamos in hope that the remain- ing pines could be saved. How- ever, the flying beetles quickly reinfected the forest. Spraying from the air has proved futile. The poison settles on the foliage and the beetles attack only the tree trunks.

At the Bandelier Monument camp grounds, where the big pon- derosa have a higher "ornamen- tal" value, another method was tried. A DDT solution was sprayed on the tree trunks from the base up 35 feet or more.

Paul Judge, superintendent of the monument, said the cost was about \$700—or almost \$2 per tree. Massey pointed out that the trees will have to be sprayed again in July, and prob- ably in August, as the second and third "flights" of the bee- tles emerge from dead trees to attack living ones.

So far, the beetles haven't dam- aged the pines with their bark soaked in the poison.

"However, with two or three sprayings a year the cost will run about \$3 a season—and that's ob- viously prohibitive for large scale

ing pines.

"There," said Massey, pointing to a heavy stand of timber on a mesa below Los Alamos, "is where we cleaned out all the infected trees last winter. This spring, there was nothing left but healthy trees. Look at it now."

Now the timbered area has tak- en on a tan color. Among the thousands of pine, not a single liv- ing one could be seen.

Southeastward, toward the Rio Grande, another hillside covered with pine and pinon had a reddish appearance. "Those trees were killed last year," Massey ex- plained. "The dead needles turn red the second year before they fall off."

A drive up State Road 4 into the higher elevations showed that beetle damage fell off sharply with increased altitude and rain- fall. Above Los Alamos, the only infested trees were those weakened by root damage, age or some other factor.

Even in badly infected areas, the beetles have avoided trees in well watered sites.

Massey, who recently helped score a knockout blow against a costly outbreak of Englemann Spruce beetles in Colorado, said operations against the Ips and Barberi are hampered by lack of re- search funds.

"We have a total annual budget of \$10,000 a year for research for all of New Mexico and Arizona. We are spending just about all of it trying to find out all we can about the Barberi. We know nothing about the Ips."

Massey said the fund was just enough to allow for one full- time man and a part-time as- sistant. Barry Pullen, a gradu- ate student of biology from the University of New Mexico based at White Rock, is handling the on-the-site work.

He said he had asked for \$50,000 and added that Congressman Joe Montoya is taking an active inter- est in the beetle program since arriving at Washington—a fact which he hoped might lead to in- creased funds.

Massey drove his car off the highway into a "plot" of towering ponderosa pine, where a study was being made of the beetle habits.

He inspected the trunk of a healthy-looking pine, found reddish bark sawdust caught in a crevice and located a small beetle hole above.

"This tree is dead," he said. "It just doesn't know it yet."

The beetle had entered the tree the previous day. Massey said the tree would be strangled in a mat- ter of a very few days.

"It took maybe two centuries for this tree to grow and that tiny beetle can kill it in a week. It drives you crazy," Massey said.

Massey sliced off a section of bark near a beetle hole. Below the bark, in the soft cambium layer, was a network of passage-

Dr. Crew To Address NRO Graduates

Dr. William H. Crew, a gradu- ate of the United States Naval Aca- demy, Annapolis and now assistant director for scientific personnel at the Los Alamos Scientific Labora- tory, will be speaker at the gradu- ation of the Santa Fe Naval Re- serve Officers School on June 24. The exercises will be held at the Naval Reserve building at the Bruns Hospital Area at 7:30 p.m.

Certificates will be awarded to 28 Naval Reserve officers who have completed courses in military jus- tice, international relations, Navy public relations and security of classified material. The courses were prepared by the Bureau of Naval Personnel of the Department of the Navy.

Dr. Crew has been at Los Ala- mos since 1950. After graduation from the Naval Academy he took his master's and doctor's degrees in physics at Johns Hopkins Un- iversity. He also attended North- western University and the Univer- sity of Indiana. From 1925-1928 he was assistant physicist at the Na- val Research Laboratory and in 1928-29 was an assistant professor at the U. S. Naval Postgraduate School.

In 1929-31 Dr. Crew was assitan professor of physics at New York University and from 1931 to 1941 was associate professor of physic at that university. From 1938 to 1941 he was chairman of the de- partment of physics. In 1935 an 1936 he was on leave at the Caver- dish Laboratory at Cambridge Un- iversity, England. From 1941 to 1945 he was again on leave as technical aide in the Office of Sc- ientific Research and Developme- of the U. S. government. In 1945- he was assistant secretary of U Institute of Radio Engineers as secretary of the Radio Technic Planning Board.

In 1946 he became dean of st- dents at Rensselaer Polytechnic I- stitute. He left Rensselaer to b- come dean of the College of E- gineering Sciences at the U. Air Force Institute in 1948 whe he remained until coming to L Alamos.

Those who will receive certi- cates Monday evening are M- ritt Barton, E. S. Brandon, Don- Brown, Peter Cable, Donald Cou- Kenneth deLapp, Edward Dign- Robert Dinagar, Edward Down- George Dummer, John Gibbs, Jo- Hernandez, Edward Johns- James Kannelmeyer, Charles L- ton, W. T. Old, Charles Princ- James Robinson, Robert Schne- er, W. D. Stephenson, Waldo To- William White, Donald Winch- Earl Wood, Robert Beller, Willi- Carlson and Emmett Brazier.

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"However, with two or three
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viously prohibitive for large scale
control. It would run into hun-
dreds of millions of dollars."

"And," Massey added, "we
can't be sure yet that even DDT
will work."

Massey said that "as far as I
know there is absolutely noth-
ing to stop the Ips from killing
all the pines around Santa Fe"
and leaving green slopes around
the capitol gravel piles dotted
with dead brush.

"We are sure that more rain-
fall, which would strengthen the
surviving trees, would permit
them to throw off the beetle. The
rainfall trend seems to be im-
proving this year but it isn't a
short-time proposition. It will
probably take two years for addi-
tional rain to help much."

An inspection trip through in-
fected area in Santa Fe and Los
Alamos counties with Massey sup-
plied strong support for the be-
lief that the infestation is a dis-
astrous secondary effect of the
drought.

From the Forest Service look-
out tower above Frijoles Canyon,
the healthy trees at the Bander-
elier campground appeared as an
oasis in a sea of dead and dy-

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Massey sliced off a section of
bark near a beetle hole. Below
the bark, in the soft cambium
layer, was a network of passage-
ways eaten out by the bugs. At
the end of one, a tiny Barberi
was exposed, chewing away.

The thin layer under the bark
is the only passageway for plant
food and moisture between the
roots and the upper portions of the
tree. When the beetles eat their
way around the tree, it dies as
quickly as if it had been chopped
down.

Massey says the Forest Service
needs to know everything about
the life cycle and habits of the
beetles before it is practical to
seek a control method.

The weak link in the cycle of
the spruce beetle wasn't found for
two years. Then Massey discovered
that the beetles which appeared
to simply vanish after their final
autumn flight actually re-entered
the trees under the needles around
their roots.

"Once we learned that, we had
them whipped. It was a relative-
ly simple matter to poison
around the base of trees com-
pared to soaking their trunks
with poison."

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Earl Wood, Robert Beiler, William
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The certificates will be presen-
ted by Cdr. Philip Higgins, direct-
or of the school. The staff of the
school is composed of Higgins, Cd
William H. Vernon, assistant c-
rector, Cdr. Charles Wherri-
Lcdr. E. G. Meyer and Lt. Ro-
bert Michaelson, instructors at
CPO Arthur Romero, adminis-
trative assistant.

The student body is made up
Reserve officers from Santa Fe
Los Alamos and Las Vegas.

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Permanent Value Plan***

Artcarved®, America's oldest an-
ringmaker, offers you the ultima-
quality, guaranteed permanent v-
modern ring design. When you
Interlocking Ring set, the rings
twist and shift on your finger; th-
of the diamonds are locked into

MOST DIRECT SERVICE