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brought to this country long ago, are most likely to be found in states south of the Mason-Dixon line in the eastern half of the country, and west of the Mississippi in Arkansas, Louisiana, Texas, New Mexico, Arizona and California.

Since the cork oak is not a native tree it is not likely to be found in the woods, but more probably near human habitations, in parks and similar localities. Especially good hunting grounds are likely to be the plantings on large estates, and the half-wild stands of trees left around the ruins of old plantation houses and abandoned ranches.

It is not difficult to identify a cork oak. If you live in the South or Southwest, or are spending the winter there, you undoubtedly know what a live-oak looks like. A cork oak looks like a live-oak, except that its leaves always have toothed margains, and its acorns are usually very much longer and less bluntly pointed than those of the live-oak.

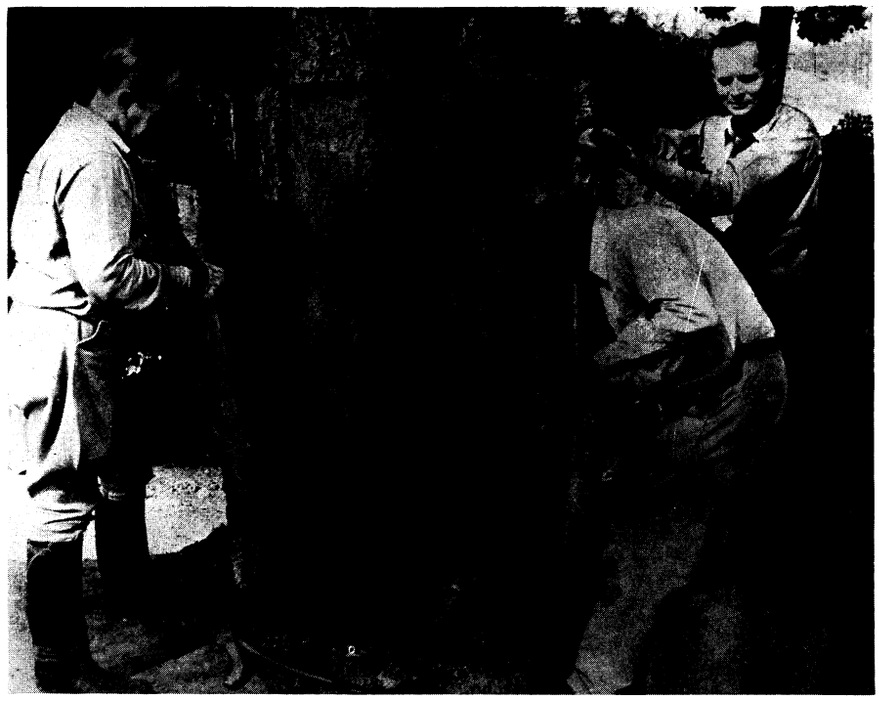
The really critical test, however, is supplied by the bark itself. Dig out a small block of the bark, if you think you have found a cork oak. If it is thick, and made of pure cork, your tree is a cork oak, and should be reported. A postcard to the Crown Cork and Seal Company, Baltimore, giving exact location, name of owner, size of tree, and abundance of acorns if any, will be a definite contribution to the national effort toward independence in one essential raw material.

The cork oaks that are now being planted will yield their first crops of cork bark in from 15 to 20 years, depending on soil, climate and other factors. After the first stripping, which usually yields bark of lower grade than that obtained in later harvests, thick shells of cork can be removed from the trunk about every 10 years for a century at least. Sometimes cork can be harvested from the lower portions of larger branches. Once a cork-oak grove is established, it becomes a long-time income-yielding part of one's estate.

Harvesting cork is a relatively simple affair, though like any job it is best done by those who have acquired some experience.

A blunt-edged, crow-bar-like tool pries the bark off in slabs. Sometimes the cork from the entire trunk can be removed in one piece.

The raw bark is put in big kettles or vats, weighted down and boiled vigorously for half an hour. This treatment removes water soluble materials and softens the bark. Then the rough outer surface of the bark, known as "hardback" is scraped off, after which the slabs are stacked up to dry and await marketing.



STRIPPING—The thick bark, valuable in many war products, is shown being stripped from a cork tree in California.

Science News Letter, October 16, 1943

ASTRONOMY

Molecule Identified

Comparison of spectrum of head of comet with that of oxyammonia flame and independent research both lead to identification of molecule as NH_2.

➤ NITROGEN-HYDROGEN molecules made up of more than two atoms have been found to be numerous in the head of comets. Working at their respective observatories early this year, Dr. Polydore Swings of McDonald Observatory, Dr. Andrew McKellar of the Dominion Astrophysical Observatory and Dr. Rudolph Minkowski of Mount Wilson Observatory independently concluded that a molecule composed of one atom of nitrogen and two of hydrogen plays a dominant role in the composition of the head of a comet.

Conducted mainly from measurements of spectrograms of the recent bright comets, Comet Cunningham (1940c) and Comet Whipple II (1942g), this study reported in the *Astrophysical Journal* (September) was made at the three observatories. Relatively few photographs of the spectra of comets in the visual region had been made previously.

The spectrum of Comet Whipple II was compared with that of an oxyammonia flame set up in the laboratory at the Dominion Astrophysical Observatory in Victoria, British Columbia. This flame very closely resembled that of ammoma burning in an atmosphere of oxygen.

The prominent features of the two spectra matched well, and it was believed that several of the strongest features in the emission spectra of comets are due to the molecule responsible for at least part of the oxyammonia flame spectrum, this molecule probably being NH_2, a molecule composed of one atom of nitrogen and two of hydrogen.

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