DENDROLOGY

NATURE RAMBLINGS

by Frank Thone

Sweets From Trees

➤ HONEY that you find on the market is most commonly labelled "clover honey" or "alfalfa honey." That is understandable enough, for there are enormous acreages in alfalfa and the various kinds of clover, and since every flower that is to produce merchantable seed must be visited by a bee, there is naturally going to be a lot of honey produced from their nectar.

However, there are a number of flowering trees that are copious producers of nectar, and that in their season are eagerly visited by bees. Their honey is not always identified for market purposes; but persons with a discriminating sweet tooth know their special fragrances, and will proclaim the virtues of their favorite tree honeys as connoisseurs enthuse about their pet wines.

Excellent honey is produced, for example, from the nectar of tulip-tree flowers. The tulip-tree is abundant over most of the country east of the Mississippi, and although its flowers do not last long they produce a copious nectar-flow, enabling the bees to fill much comb with this type of honey in a short time. A related type of fragrant honey, sometimes met in the South, comes from the flowers of the tulip-tree's close kindred, the magnolias.

Of the South also, and the Southwest, is orange-blossom honey, which carries with it some of the fragrance of the flowers themselves. It is one of the lightest-colored of the tree honeys, a point in its favor so far as the market is concerned.

A hardy tree of the North, whose flowers are the source of a most excellently-flavored honey, is the linden or basswood. Its clustered little flowers are inconspicuously greenish but intensely sweet-scented, and while they are in bloom the bees simply go mad over them.

Many honey-tasters declare that the best-flavored of all honeys comes from the sourwood tree. This is a tree of rather limited distribution, being abundant only in parts of the Appalachian highlands, but where it does grow, and bees are given a chance at it, they will produce from its clusters of heather-like bloom a most unforgettable sweet.

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ASTRONOMY

Different Types of Light

Giant member of double-star in constellation of Auriga, emits most of its yellow light: smaller star responsible for large amount of total ultraviolet light.

➤ THE smaller member of a two-star team in the constellation of Auriga, the charioteer, has been found to contribute little to the yellow light emitted by the double star, but accounts for a large amount of its total ultraviolet light.

When the blue-type star of Zeta Aurigae is completely exposed, the percentage of ultraviolet light received from the double star is four times as great as during eclipse, reports Dr. Edison Pettit of Mount Wilson Observatory of the Carnegie Institution of Washington.

Although the percentage of yellow light sent earthward by the two stars is somewhat less when both stars are visible, the quantity of yellow light received is a little more than when the giant red star hides its smaller companion.

Zeta Aurigae is a fourth magnitude star, thus is visible with the naked eye in the base of that little triangle of stars near Capella.

The diameter of the giant red star, five and one-half times brighter than its blue companion, is 69 times as large as that of the smaller star and 200 times that of the sun, Dr. Z. Kopal of Harvard College Observatory has calculated.

During eclipse, the light from the smaller star is completely shut off for about 37 days. Three eclipses occur in eight years, one at the beginning of the year, one in August and one in May.

The withdrawal of light during eclipse is much more noticeable when studied in some regions of the spectrum than in others. In visual light the variation is slight, being only 0.18 magnitude. In photographic blue light, the double star loses 0.68 magnitude at eclipse-time, Dr. Pettit reported to the Astronomical Society of the Pacific. But in ultraviolet, the light decreases two whole magnitudes when the smaller star is hidden.

A tenuous atmosphere surrounds the giant star. Like the corona around our sun, it extends about a diameter from the star's surface. Giant prominences, similar to the huge flame-like clouds of gas seen erupting from the surface of the sun, have been discovered on this star. The layer surrounding the star being semitransparent, the actual eclipse begins with a diminishing of light rather than as a sharp cutoff of brightness.

No diminution of the light of the blue star during the time it was passing behind the tenuous atmosphere of the giant red star had been detected in the past. During the eclipse last spring, however, the refrigerated photoelectric photometer that Dr. Pettit used showed that while the yellow light is not affected, the blue light of the blue star is diminished 0.07 magnitude and the ultraviolet light 0.12 magnitude. These quantities are too small to be readily measured by ordinary means.

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