

ASTRONOMY

**Double Star Discovered
By Canadian Astronomer**

► A LARGE NEW double star has been discovered by Dr. J. A. Pearce, director of the Dominion Astrophysical Observatory. It is the spectroscopic binary, HD 34333, an eighth magnitude star in Auriga.

Each part of this new system is a star having 23 times the mass of the sun and revolving around the other in slightly over 4 days, Dr. Pearce reported to the American Astronomical Society. Its orbital velocity is about 150 miles per second, and as one star passes between us and the other, it may produce a very slight partial eclipse, which Dr. Pearce predicts, but which has yet to be observed. Probably the light changes are small, but Dr. Pearce suggests accurate observations of the star's light to see if there occur any periodic variations which would be caused by such eclipses. The present distance estimate places the system 3,500 light-years from the sun.

Science News Letter, June 12, 1943

ASTRONOMY

**Amateur Astronomers Watch
Variable Stars During War**

► AMATEUR ASTRONOMERS have not let the war prevent them from keeping tabs on their favorite variable stars, Leon Campbell, recorder of the American Association of Variable Star Observers, told astronomers. Although reports from foreign countries have been curtailed, the vigil of the celestial "blinkers" is still going on in America, and undoubtedly many European observers are keeping their observations recorded until the day when they can be safely sent over here to be combined with others made about the same time.

Speaking before the 70th meeting of the American Astronomical Society in Cambridge, Mass., Mr. Campbell reported on an analysis of more than half a million observations made by amateurs during the past 20 years and involving 400 long-period variables. These are stars which take from 50 days to several years to go through their cycles of light fluctuations, some in a predictable, some in a very eccentric manner.

A large proportion of the stars remain for months at a certain brightness (minimum), then suddenly increase in light to a maximum, frequently more than

100-fold, remain at maximum only a relatively short time, and then more slowly return to minimum. Practically all of these variables are red stars with comparatively low surface temperatures, much cooler, for instance, than our sun.

Mr. Campbell credits hundreds of observers, not only in the United States, but in all parts of the world, and he says the observing of variable stars is one field of astronomical endeavor in which the amateur can seriously serve.

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MEDICINE

**Avoid Handling Pets Which
May Be Carrying Poison Ivy**

► IF YOU ARE susceptible to poison ivy, remember to beware of dogs and pets that run about outdoors. They may in their wanderings brush against the poison ivy plants and bring home the chemically irritating principle on their fur. Anyone who then strokes the dog, cat or other pet, or lets the animal rub up against bare ankles or legs, may come down with ivy poisoning, if susceptible to it. Such contacts may account for some of the attacks in people who have carefully avoided the plant itself.

Persons susceptible to this miserable blistering and itching skin ailment can get it merely by shaking hands with someone who has handled the plant, unless the second person has washed his hands after handling the plant. So be chary about how you greet friends who have just come in from a country ramble or from working in the garden. Touching shoes, clothes or tools that have touched the plant can also bring on an attack.

Spring and early summer are the worst poison ivy seasons because the sap is then most abundant. Dead, dry plants, however, and especially the smoke from burning plants, can cause the poisoning. Have someone make sure that any logs gathered for next winter's fireplace don't bring the ivy poison along with them.

Several kinds of chemical armor against ivy poison have been developed for use before going into the woods or other places where the ivy plants are likely to be encountered. Latest of these are two ointments worked out by scientists of the U. S. Public Health Service. They have also developed a new treatment your doctor may want to try in case you are unlucky enough to get an attack of poison ivy.

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IN SCIEN

ENGINEERING

**High-Speed Motion Pictures
Used to Study Weapons**

► HIGH-SPEED movies are being used to increase the efficiency of our fighting men by helping to develop improvements in mechanical devices of war.

Captain E. M. Watson of the U. S. Air Corps reported to the Society of Motion Picture Engineers that the pleasure-giving camera analyzes performance of fighting equipment that operates at a speed far too rapid for the human eye to follow.

A high-speed motion picture of the firing of a gun, when one side of the gun has been removed, makes it possible to study the loading of ammunition.

Once the rapid-fire motion of the device has been "caught" by the camera, the rate at which the film is shown can be slowed down to suit the human eye. Captain Watson illustrated this by showing motion pictures of a gun in action.

From the motion picture, individual and sequence still pictures may be made and curves plotted to show the action involved. These assist technical men with testing and research.

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RESOURCES

**Russian Dandelion Grown
For Rubber in Canada**

► CANADA'S SUPPLY of natural rubber may be augmented by crude rubber obtained from the roots of the Russian dandelion, current experiments indicate.

The Dominion's Department of Agriculture first planted seeds of this dandelion, known as kok-saghyz, in the spring of 1942. Quarter-acre plots were used at eight experimental stations across Canada.

An average of 5,100 pounds of roots per acre was gathered. The experimental farm in Kentville, Nova Scotia, topped the list by producing 8,100 pounds of roots. Rubber content from the roots was found to vary from 2 to 7 per cent.

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CE FIELDS

MEDICINE

Appendix Found to Serve As Germ Trap in Rabbits

► THE APPENDIX, generally considered a useless and frequently troublesome appendage to man's digestive system, apparently serves a useful function to the rabbit.

In these animals it acts something like a germ trap, it appears from a report by Dr. Frank Baker and Dr. John Enticknap, of the County Technical College at Guildford, England (*Nature*, May 8).

The scientists have found in the appendix of the rabbit many of the scavenger cells which the body uses to dispose of unwanted microorganisms. The scavenger cells contained numerous bacteria.

Whether these scavenger cells in the rabbit's appendix act as a protection against disease or as an aid to rabbit nourishment is now being investigated. Some bacteria in the intestinal tract contribute to nutrition by manufacturing some of the vitamins.

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MEDICINE

Eye Infections Threaten Soldiers in Tropics

► EYE INFECTIONS from trachoma to "pink eye" are hazards to the United Nations forces fighting in tropical and subtropical regions. Tests for helping to diagnose these conditions which clinical pathologists may be called on to make were reported by Dr. Charles Weiss, of Mount Zion Hospital, San Francisco, at the Chicago meeting of the American Society of Clinical Pathologists.

Infections of the delicate membrane lining the eyelids and covering the eyeball in front are very common in the tropics, Dr. Weiss said, because of the excessive heat, dust and sunlight, crowding, filth, lack of water, malnutrition and vitamin deficiencies.

"It is a common sight in Tunis, for example," he said, "to see Arabs with forehead and eyelids covered with flies which are feeding on pus exuding from infected eyelids. These superstitious peo-

ple will not kill an insect, since they believe that the soul of an ancestor may have lodged within one. With summer and fall temperatures ranging from 90 to 132 degrees Fahrenheit, it is not surprising that flies can transport the infection from the eye of one person to that of another," he commented in referring to the prevalence of gonorrhoeal ophthalmia in both children and adults in the tropics.

Trachoma, he said, takes precedence over other diseases as the cause of blindness and human misery in tropical and subtropical countries.

"Shipyards conjunctivitis" is another tropical eye disease, having originated in India, Malaya, Tasmania and Hawaii.

Smallpox, the germs of syphilis, gonorrhoea and lympho-granuloma venereum, bacillary and amebic dysentery, rat-bite fever, yaws, plague, cholera, typhus fever and malaria are among other eye hazards of the tropics described by Dr. Weiss.

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MEDICINE

Wearing G. I. Shoes Cure for "Deck Ankles"

► Rx FOR SOLDIERS about to embark for foreign service: Wear your G. I. shoes while on the transport, to avoid getting "deck ankles."

That is the name British naval surgeons have given a new ailment they find afflicting men who wear gymnasium shoes on troop ships, the London correspondent of the *Journal of the American Medical Association* (May 29) reports.

Wearing boots (Americans call 'em high shoes) is a specific cure for the condition, they found.

Swelling, aching and stiffness of one or both ankles on about the tenth day of the voyage and tired feet, especially at the end of the day, are the symptoms of "deck ankles." The cause, it is suggested, is slight injury from walking on hard decks and repeated small twists of the ankle when going up and down hatchways while wearing gymnasium shoes. Varicose veins, sunburn, and lack of seasoning among the troops were aggravating factors.

Men who went back to boots, with the greater support for the ankles, got over their "deck ankles" in five days, while it took twelve days for those who continued to wear gymnasium shoes.

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RESOURCES

Seaweeds Investigated As Sources of Food

► SEAWEEEDS, long neglected by Americans as land weeds, are now under close scrutiny at the University of California as possible sources of food. In rather crude form, they are traditional articles of diet in Japan; and it is considered not impossible that with better processing they might be made palatable to Americans and Europeans.

In the botanical laboratories a Chinese scientist, Dr. C. K. Tseng, has transplanted a number of species from offshore rocks to tanks of sea water where they can be studied under known and controlled conditions. His idea eventually is to establish a "submarine agriculture," with large-scale cultivation and regular harvesting methods.

A South African botanist now at the University, Dr. George Papenfus, states that several seaweed species along the coasts of his native land have been found to be good sources of agar, a kind of vegetable gelatin needed for laboratory culturing of bacteria and other microorganisms. Before the war, agar was supplied practically altogether from Japan, and the lack of it has been a serious handicap in hospitals and research laboratories.

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STATISTICS

Wedding Bells Now Ring Oftener in Far West

► THE WAR is changing the influence of geography over marriage, making wedding bells ring more often in the Far West and not quite so frequently in the South, statisticians of the Metropolitan Life Insurance Company report.

"In this country as a whole, about six out of every 100 men or women of marriageable ages wed during a typical year," the report states.

For the South, the figure has been almost nine out of 100, and for the Far West it has been somewhat under five out of 100. The North has been about halfway between. Now the West is having more marriages, especially in the ages under 35, while the South is having fewer.

An increase in marriages among the older people and fewer marriages among younger ones is predicted for the future as a result of the war.

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