

number of times during the pre-Christian era. And a discovery just made by the Swedish expedition points to a surprising gap in its history. The excavators, after having cleared the strata which contained relics dating to about 300 B.C., found that the level directly beneath this contained a layer of relics undoubtedly belonging to a period about 1600 B.C. The scientists are now hoping that other excavations may throw some light on what had happened during the intervening 1,300 years.

One of the most important discoveries made at Asine this year is that of a house which expert archaeologists from other countries pronounce the first house of the geometric period thus far excavated. A description of this house is, however, not now available.

The Swedish expedition will resume its field work in the autumn of this year.

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THE NEW SUNSPOT CYCLE SETS IN

By Isabel M. Lewis,  
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Old Sol is rousing himself once more like some huge giant awaking from his slumbers. After passing through a remarkably quiescent state during the sunspot minimum period of a year or more ago, he shows numerous signs of renewed activity

Sunspot groups belonging to the new cycle are now appearing in increasing number and size in high solar latitudes as the spots of the old cycle dwindle away in low solar latitudes. Eruptive solar prominences, flames of incandescent hydrogen, helium and calcium, are more in evidence now than they were at the sunspot minimum and, in general, they rise to greater heights. The bright masses of calcium gas elevated somewhat above the normal solar surface, which give the sun its rice-grained or mottled appearance and which appear in greatest intensity in the vicinity of sunspots, are now more brilliant than formerly and more prevalent.

Then, too, the solar corona observed last fall in Mexico at time of total solar eclipse was brighter and more intricate in its structure than the corona of 1922 observed in Australia at a time when the sun was in an unusually peaceful state. Everything points to the gradual increase in the activity of the sun which will culminate a few years hence - probably during the year 1928 - in the outbursts of the sunspot maximum period when for weeks at a time the surface of the sun will never be free from spots, when great eruptive prominences will frequently attain to heights of many thousand miles and streams of electrons shot forth from the sun with unusual force and intensity will penetrate deep into our own atmosphere and set up magnetic and meteorological disturbances of various kinds.

Much has been learned of the nature of sunspots in the past two decades largely through the daily systematic observations of solar phenomena at observatories where much time is devoted to solar research, as at the Mt. Wilson and

Yerkes Observatories.

Probably no astronomer of the present day has added more to our knowledge of the nature of sunspots than Dr. George E. Hale, past director of the Mt. Wilson Observatory. As far back as 1908, Dr. Hale observed at Mt. Wilson the vertical motion in sunspots and showed them to be solar storms of a cyclonic nature. Shortly afterwards he confirmed the suspected existence of magnetic fields in sunspot. Now it is known that all sunspots act as magnets and occur generally in bipolar groups, the leading group whirling in one direction with polarity of one kind, the following group whirling in the opposite direction and carrying the opposite charge. The intensity of the magnetic field depends in general upon the size of the spot or spot group.

One of the strangest discoveries bearing on the nature of sunspots has been the discovery of the reversal of the polarity of sunspots with the sunspot minimum. Prior to 1912, a sunspot minimum year, it was observed at Mt. Wilson that to the preceding spots of a bipolar group in the northern hemisphere of the sun carried negative charges and the following spots positive charges, while the reverse was true of spots in the southern solar hemisphere. After the sunspot minimum was passed a reversal of polarity took place in all groups and this was maintained until the year 1922 when the sunspot minimum next occurred.

Waiting with interest to see what would take place at this time observers found that again a reversal of polarity took place. It is suspected that this change of polarity indicates a change in the direction of whirl of individual spots while the dominant charge of the entire group remains the same. Yet there still remains much of mystery to clear up regarding sunspots and the sunspot cycle of solar activity.

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SECOND BABIES YOUNGER IF THEY ARE GIRLS

Parents have to wait longer for their second child if it is a girl than if it is a boy.

This is the conclusion drawn from data reported to the Eugenics Research Association by Prof. H. D. Fish of the University of Pittsburgh as a result of an investigation into the control of sex of children before birth.

A study of 2,043 Hebrew families, tabulated from nurses' reports at the Irene Kaufmann Settlement, Pittsburgh, Pa., indicated that the time interval between first and second children is measurably longer preceding the birth of a female second child than it is preceding the birth of a male second child.

"It seems to make no difference what the sex of the first child was," Prof. Fish declared, "More than 95 per cent of the families studied were Russian Jews,