THE WEEK IN NATURE

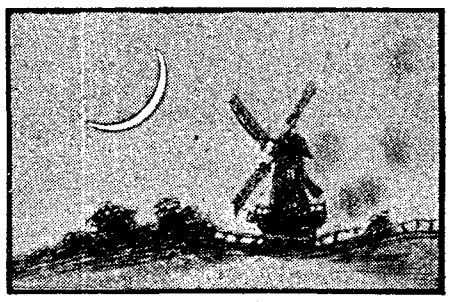
Young Swallows on the Wing

TADPOLES GETTING FULL-GROWN

'TWAS summer, through the opening grass
The joyous flowers upsprang,
The birds in all their different tribes
Loud in the woodlands sang:
All care was banished, and repose
Came to my wearied breast,
And kingdoms seemed to wait on me,
For I was with the blest.

NATURE CALENDAR NEXT WEEK

June 13. Young swallows are fledged
14. Young broods of redstarts begin to fly
15. The dagger moth appears on the wing
Frog tadpoles are nearly full-grown
16. The turtledove lays its eggs
The six-spot Burnet moth appears
17. The silver Y moth is on the wing
The rose beetle is seen
18. The eyed hawk-moth is on the wing
Young broods of greenfinches are fledged
19. The asparagus beetle gets active
Young partridges are hatched out
Song of golden-crested wren ceases



The moon in the middle of next week

Time-table of Sun, Moon, and Sea

	Sunday	Wednesday	Friday
Sunrise ..	4.45 a.m.	4.44 a.m.	4.44 a.m.
Sunset ..	9.15 p.m.	9.17 p.m.	9.18 p.m.
Moonrise ..	2.29 a.m.	4.50 a.m.	7.14 a.m.
Moonset ..	5.30 p.m.	9.2 p.m.	10.35 p.m.
High Tide ..	11.37 a.m.	2.23 p.m.	4.4 p.m.

High tide is for London Bridge

NEXT WEEK IN THE GARDEN

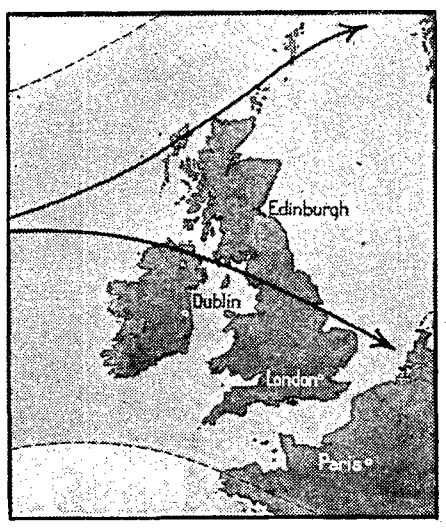
Sow endive, and transplant leeks that were sown in March. Continue sowing and planting out successions of lettuce; water frequently in dry weather, and tie up for blanching as required.

Hoe and thin early-sown crops of onions, and encourage growth by watering and stirring the soil about them occasionally.

Herbaceous borders will need much care, as a number of plants will require staking, and others cutting down as they cease flowering, to make room for others to spread.

C.N. WEATHER MAPS OF THE U.K.

The Storms of June



This map shows the storm areas in the United Kingdom for June. The frequency of the storms is indicated by the darkness of the area, and the arrows show the direction.

C.N. QUESTION BOX

Little Puzzles in Natural History

Answered by Our Natural Historian

Here our Natural Historian, Mr. Ernest Bryant, will be glad to give brief answers to questions concerning natural history. All questions must be asked on postcards, and not more than one on each card.

Why Do Rats Leave Falling Houses?

They sometimes do so because they are terrified by sound and movement preceding the fall. When foundations begin to subside the nests and burrows of the rats are disturbed.

When a wall is about to collapse above, tremors and shocks would be communicated like sound to the burrows and so create a panic exodus. It is fear of existing conditions, and not mysterious fore-knowledge, that drives rats from falling houses.

How Many Eggs Does a White Ant Lay?

Guesswork puts the number at 60,000, but no one knows. A queen white ant—the right name is termite, for there are no white ants—can lay eggs like the ticking of a grandfather clock—one a second, 60 a minute, or at the rate of over 80,000 a day.

Egg-laying lasts for months at a time, and as the queen lives for years the final total must be enormous.

What Is "the Canker in the Bud"?

The canker in the bud is simply a nasty little caterpillar which, hatching from an egg, feeds upon the bud and ruins what might otherwise have been a beautiful rose.

Does an Elephant Drink With Its Trunk?

The trunk plays a part in the elephant's act of drinking, but not the whole part—not the swallowing. Water is drawn into the trunk, then the mouth is opened, the end of the trunk inserted in it, and the water squirted down the throat. It is curious to see a bucket of oats eaten in the same way.

Can a Plant Live on Insects?

The bladderwort, the butterwort, and some 500 other species of plants eat insects. All derive support from air and either water or soil, but they obtain nitrogen from the bodies of insects.

The prey is held prisoner by sticky juices, lured into snares, or snapped as by tiny rat-traps. Then the insect juices are sucked by the plant, or absorbed after a digestive fluid has been poured upon them. Such plants can live in artificial conditions without insects, but in the wilds insects are their main food, so we must say that plants can live on insects.

Does Ivy Destroy Masonry?

Ivy preserves good walls and shelters those which are not perfect. Only when bad cracks appear and mortar and plaster crumble can the tentacles of the ivy do damage. In these conditions the tiny roots thrusting in may hasten deterioration, but not until age or violence to the fabric has prepared the way.

How Far Do a Tree's Roots Spread?

They spread like the boughs and branches in the air, always travelling in search of food and water. An acacia in hot countries sends its roots down more than 20 feet, and out and about in all directions.

A mangrove tree may easily become a grove, for the stem that arises arches over, and every bough descends and gives off new roots from which new growth proceeds. A cucumber plant, growing in a cubic yard of soil, has been shown to have roots which, if joined in one continuous line, would reach 15 miles.

Do Birds Hibernate?

Even now we read in the papers that on warm winter afternoons swallows are seen flying in England, and that they must have been hibernating. Such "swallows" are undoubtedly bats! Birds do not and cannot hibernate—that is, pass the winter foodless and sleeping.

They migrate before the time of scarcity comes; if they cannot do this they stay, starve, and die.

WOMAN THE FIRST TOILER

What She Did in the Stone Age

FIRST IN EVERYTHING SAVE KILLING

Woman was the first farmer, the first craftsman, the first architect, says Miss Preece, a learned lady who has been delivering lectures on primitive handicrafts. Man did the fighting and killing only, and woman everything else.

First in everything were those early women, save in killing; and, if all accepted notions of Stone Age days and ways be correct, the women had at times to share even in that ungentle exercise.

But they were not only tillers of the soil, builders of the wattle huts, weavers of baskets, mistresses of the potter's art; these ancient women were the first artists. They used dyes which were very beautiful, dyes which chemists have only latterly reproduced with great difficulty. The wood from which they got their blue was derived, in all probability, from the *Isotis tinctoria*, which still grows wild in Lincolnshire. Richer tones came from shellfish, but these the men would surely have to catch.

A Stone Age Mystery

Where did the Stone Age women get the lining with which they made their wicker bottles watertight? Miss Preece says the material resembled to a wonderful degree the modern asphalt which paves our roads.

The Stone Age women used a sort of pitch for their purpose. Where did they get it? We have none in England; we import it mainly from the seemingly inexhaustible pitch lakes of Trinidad. How came our British women by a pitch formed, in the bowels of a distant land, from tropical vegetation acted on by subterranean heat? We do not know.

There are still Stone Age women in the world, among savages, and among degenerate white and brown and yellow races; women who are hewers of wood and drawers of water, who till the soil and harvest the crops, who carry the burdens, make the clothes, build the homes, perform all the labour of the dwelling and fields.

Civilisation alone brings emancipation for women from the grinding misery of serfdom in her own home; and when civilisation first arose, and women were relieved of their ignoble burdens, they became ciphers, unrecognised in public and social life, as they remain in a Turkish harem today.

ANOTHER SUN-BAKED WORLD

Little Planet in the Setting Sun

MERCURY AND WHERE TO LOOK FOR IT

By Our Astronomical Correspondent

It may be possible during next week to get a glimpse of Mercury, the most rapid and fleeting of the planets. On any fine, clear evening it should be looked for about half an hour after sunset, say from half-past nine till half-past ten, for it is only between these times that there is any possibility of seeing this sun-baked world.

He will be seen to shine with a steady golden light, but, as he is neither so ruddy nor bright as Mars, some patience and keen sight will be required to pick out this little world amid the radiant glow that follows sunset.

Next Wednesday and Thursday nights Mercury should be found to the left or west of the north-west point.

At about ten o'clock he will be twenty times the Moon's apparent width above the horizon, so the chances are good for seeing, as he does not set until an hour and three-quarters after the Sun.

Rarely-Seen World

If the twin stars Castor and Pollux can be picked out in the north-west they will help us, because they form a right-angled triangle with Mercury, which is to the south-west of them, and about half as far again away as Castor is from Pollux.

A more direct guide is got by drawing an imaginary line from the star Regulus to Jupiter, and then, curving it slightly towards the north-west, continuing it to nearly double the distance, to the place where the Sun has set. This line will pass close to Mercury.

Very few of our grown-up readers will have seen this planet. Indeed, it is said that the great astronomer Copernicus never saw it, notwithstanding all his efforts, but then, of course, he had not our advantages in knowing exactly when and where to look.

The Little Round Black Disc

Just now Mercury is speeding towards the Earth from round the other side of the Sun, travelling at about 25 miles a second—more than half as fast again as our world—so that next month he will begin to get between us and the Sun, when Mercury will be the nearest object to us in the heavens except the Moon. He will be nearer even than Mars by upwards of thirty million miles. But then he will be almost exactly between us and the Sun, and we shall have the dark side of Mercury presented to us, so that he will be invisible.

Occasionally Mercury comes exactly between us and the Sun, when he is seen as a little round black world silhouetted against the bright disc of the Sun. This is called a *transit* of Mercury; the last occurred in 1914, and the next will be on May 7, 1924.

The Storm of Fire in the Sun

The writer had the good fortune to see a transit through a powerful telescope when Mercury appeared much smaller than a sun-spot, a great cyclonic outburst and upheaval taking place on the Sun. Now, Mercury is but 3000 miles in diameter as compared with our Earth's 7900 miles; therefore, by remembering that the sun-spot was half as far again away as Mercury, it then becomes quite obvious that the great storm of fire on the Sun was sufficient to envelop, not only Mercury, but the Earth as well.

Fortunately, Mercury was 30 million miles away from it, while our fair Earth was nearly 94 million miles and quite secure, but by no means unaffected, so that these solar cyclones must considerably influence a little world so close to them as Mercury.

G. F. M.