

11th October

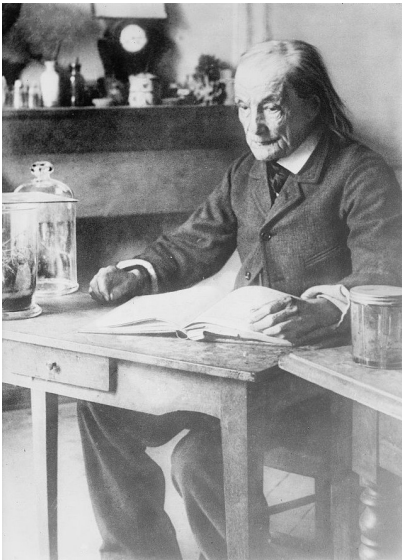
Memory verse

Blessed be the Lord my strength

which teacheth my hands to war,
and my fingers to fight: Psalm 144:1

Little ones can learn the words in bold and older ones the whole verse. The three parts mean the verse can be divided up between children to aid learning.

Something to read from science history¹



Jean Henri Fabre (1823-1915), born into a poor home in France in 1823, became a great naturalist and made the study of insects, entomology, his life's work. When he died on **October 11**, 1915, he left ten books filled with detailed accounts of insect behaviour. Rigorous observation and scientific method in these books is combined with a writing style that is so engaging that ordinary readers enjoyed them and the next generation of entomologists found them inspiring. Charles Darwin² referred to him as “an incomparable observer”, but Fabre did not accept Darwin's theory of evolution. “Fabre concluded his lifetime of studying nature by maintaining that the original Genesis animal kinds were fixed and unchanging, stressing, 'we cannot refrain from proclaiming the necessity of a sovereign Mind, the creator and instigator of order and harmony...to the glory of God the Creator.'” “Pasteur exploded forever the insanity which professed to see life arising from a chemical conflict in a mass of putrescence,” he declared.³

In Fabre's day entomologists usually studied dead insects. Fabre was unusual in that he preferred to watch them in their natural habitat. He introduced the scientific method into the study of insect habits. In this extract he writes about the piece of ground that was his “laboratory”:

It has always been my great desire to have a laboratory in the open fields; not an easy thing to obtain when one lives in a state of constant anxiety about one's daily bread. For forty years it was my dream to own a little bit of land, fenced in for the sake of privacy: a desolate, barren, sun-scorched bit of land, overgrown with thistles and much beloved by Wasps and Bees. Here, without fear of interruption, I might question the Hunting-wasps and others of my friends in that difficult language which consists of experiments and observations. Here, without the long expeditions and rambles that use up my time and strength, I might watch my insects at every hour of the day. And then, at last, my wish was fulfilled. I obtained a bit of land in the solitude of a little village.

It was a *harmas*, which is the name we give in this part of Provence to an untilled, pebbly expanse where hardly any plant but thyme can grow. It is too poor to be worth the trouble of ploughing, but the sheep pass there in spring, when it has chanced to rain and a little grass grows up.



1 Adapted from Owen, Evan, *What Happened Today?* Book 3 available on the *Mothers' Companion* flashdrive <https://motherscompanion.weebly.com/> with additional information from <https://www.icr.org/article/jean-henri-fabre-anti-evolutionist>.

2 See the lesson for April 19th for more about Darwin.

3 <https://www.icr.org/article/jean-henri-fabre-anti-evolutionist>. See the lesson for April 20th for information on Pasteur.

My own particular *harmas*, however, had a small quantity of red earth mixed with the stones, and had been roughly cultivated. I was told that vines once grew here, and I was sorry, for the original vegetation had been driven out by the three-pronged fork. There was no thyme left, nor lavender, nor a single clump of the dwarf oak. As thyme and lavender might be useful to me as a hunting-ground for Bees and Wasps, I was obliged to plant them again.

There were plenty of weeds: couch-grass, and prickly centauries, and the fierce Spanish oyster-plant, with its spreading orange flowers and its spikes strong as nails. Above it towered the Illyrian cotton-thistle, whose straight and solitary stalk grows sometimes to the height of six feet and ends in large pink tufts. There were smaller thistles too, so well armed that the plant-collector can hardly tell where to grasp them, and spiky knap-weeds, and in among them, in long lines provided with hooks, the shoots of the blue dewberry creeping along the ground. If you had visited this prickly thicket without wearing high boots, you would have paid dearly for your rashness!

Such was the Eden that I won by forty years of desperate struggle. This curious, barren Paradise of mine is the happy hunting-ground of countless Bees and Wasps. Never have I seen so large a population of insects at a single spot. All the trades have made it their centre.

Here come hunters of every kind of game, builders in clay, cotton-weavers, leaf-cutters, architects in pasteboard, plasterers mixing mortar, carpenters boring wood, miners digging underground galleries, workers in gold-beaters' skin, and many more.

See here is a Tailor-bee. She scrapes the cobwebby stalk of the yellow-flowered centaury, and gathers a ball of wadding which she carries off proudly with her mandibles, or jaws. She will turn it, underground, into cotton satchels to hold the store of honey and the eggs. And here are the Leaf-cutting Bees, carrying their black, white, or blood-red reaping brushes under their bodies. They will visit the neighbouring shrubs, and there cut from the leaves oval pieces in which to wrap their harvest.

Here too are the black, velvet-clad Mason-bees, who work with cement and gravel. We could easily find specimens of their masonry on the stones in the *harmas*. Next comes a kind of Wild Bee who stacks her cells in the winding staircase of an empty snail-shell; and another who lodges her grubs in the pith of a dry bramble-stalk; and a third who uses the channel of a cut reed; and a fourth who lives rent-free in the vacant galleries of some Mason-bee. There are also Bees with horns, and Bees with brushes on their hind-legs, to be used for reaping.

While the walls of my *harmas* were being built some great heaps of stones and mounds of sand were scattered here and there by the builders, and were soon occupied by a variety of inhabitants. The Mason-bees chose the chinks between the stones for their sleeping-place. The powerful Eyed Lizard, who, when hard pressed, attacks both man and dog, selected a cave in which to lie in wait for the passing Scarab, or Sacred Beetle. The Black-eared Chat, who looks like a Dominican monk in his white-and-black raiment, sat on the top stone singing his brief song. His nest, with the sky-blue eggs, must have been somewhere in the heap. When the stones were moved the little Dominican moved too. I regret him: he would have been a charming neighbour. The Eyed Lizard I do not regret at all.

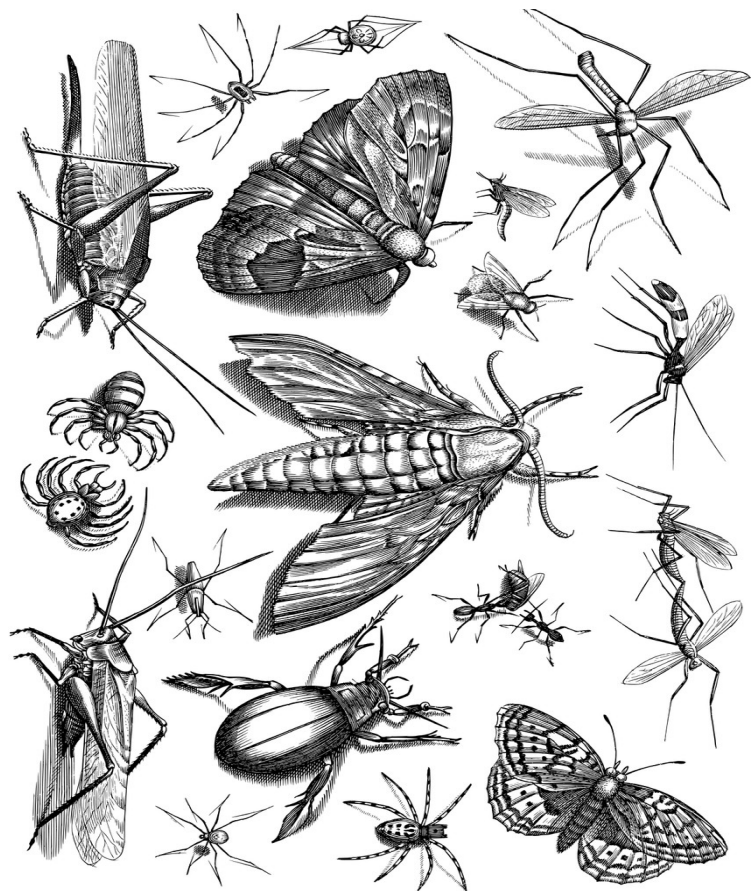
The sand-heaps sheltered a colony of Digger-wasps and Hunting-wasps, who were, to my sorrow, turned out at last by the builders. But still there are hunters left: some who flutter about in search of Caterpillars, and one very large kind of Wasp who actually has the courage to hunt the Tarantula. Many of these mighty Spiders have their burrows in the *harmas*, and you can see their eyes gleaming at the bottom of the den like little diamonds. On hot summer afternoons you may also see Amazon-ants, who leave their barracks in long battalions and march far afield to hunt for slaves.

Nor are these all. The shrubs about the house are full of birds, Warblers and Greenfinches, Sparrows and Owls; while the pond is so popular with the Frogs that in May it becomes a deafening orchestra. And boldest of all, the Wasp has taken possession of the house itself. On my doorway lives the White-banded SpheX: when I go indoors I must be careful not to tread upon her as she carries on her work of mining. Just within a closed window a kind of Mason-wasp has made her earth-built nest upon the freestone wall. To enter her home she uses a little hole left by accident in the shutters. On the mouldings of the Venetian blinds a few stray Mason-bees build their cells. The Common Wasp and the Solitary Wasp visit me at dinner. The object of their visit, apparently, is to see if my grapes are ripe. Such are my companions. My dear beasts, my friends of former days and other more recent acquaintances, are all here, hunting, and building, and feeding their families. And if I wish for change the mountain is close to me, with its tangle of arbutus, and rock-roses, and heather, where Wasps and Bees delight to gather. And that is why I deserted the town for the village, and came to Serignan to weed my turnips and water my lettuces.⁴

Something to do

You can see from the above extract that Fabre was a patient observer. You can see too how he loved the creatures around him. The Bible encourages us to watch the insects and learn from them. Look up Proverbs 6: 6-8. Which insect are we being told to look at? What conclusion should we draw from our observation? Now go and look for some small creatures in your garden. Below is a list of some you might find. Which of them are insects? Some of them are suitable to put in a small jar such as a jam-jar and take indoors to observe or draw. You might be able find the home of an insect or other creature that you could observe regularly as Fabre did.

ants
 aphids
 butterflies
 centipedes
 cockchafers
 crickets
 daddy-long-legs
 devil's coach-horses
 earwigs
 flies
 grasshoppers
 ground beetles
 hoverflies
 leafhoppers
 ladybirds
 longhorn beetles
 millipedes
 moths
 spiders
 weevils
 woodlice



4 Extract from *Fabre's Book Of Insects* Retold From Alexander Teixeira Mattos' Translation Of Fabre's *Souvenirs Entomologiques* By Mrs . Rodolph Stawell.

Raising a wreck



On 7th June we looked at underwater archaeology, on 17th May we found out about a sensational discovery on an ancient shipwreck and on September 6th we learned about a shipwreck found in the Thames. Today is the anniversary of the raising of “the noblest ship of sayle [of any] gret ship, at this howr, that I trow be in Cristendom” as Admiral Edward Howard (1476-1513) once called her, the *Mary Rose*.

October 11th 1982 saw the climax of one of the most exciting underwater archaeological investigations ever. The usual methods of raising a wreck were unsuitable because only a third of the *Mary Rose* was intact. The ship was deep in the mud on the sea bottom. If cables were passed round her in the normal way to raise her she would probably just fall apart once she reached the surface. It was therefore decided to empty the ship of all its contents before it was lifted out of the water. Then, while it was still under water, steel braces and frames could be put in place to strengthen the ship.

A diving operation had begun in the 1970s. Wonderful artefacts that told about daily life on board as well as about seafaring, armaments and the Tudor navy were brought to the surface. Musical instruments, barber's equipment, carpenter's tools, as well as canon and longbows all added to what we know about life in Tudor times. Then, with all these good things safely brought to the surface, the lifting work could begin.

A supporting steel structure was placed over the ship and secured by bolts to the ancient hull itself. Then, when the frame was secured to the hull, it was slowly jacked up on four legs and the ship was pulled off the seabed by inches. With the hull attached to its frame still underwater, a huge crane was brought up which moved the frame and hull, lifting them into a special cradle lined with water-filled bags to protect the hull. The upper frame was attached to the cradle so that the hull was completely enclosed. All this took place under the sea. The *Mary Rose* was still completely under water.

The final lift that would bring the ship to the surface began in the morning of October 11th. Watched by journalists, the leader of the archaeological team, members of the salvage team and the Prince of Wales (now His Majesty King Charles III), who had himself dived on the wreck with the team, the crane lifted the frame and cradle containing the hull slowly to the surface. In the picture you can see the frame just below the water. Then the hull itself broke the surface to an excited chorus of ships' hooters and a gun salute fired by the Royal Navy.



By the Mary Rose Trust. CC BY-SA 3.0.
<https://commons.wikimedia.org/w/index.php?curid=8893480>

The divers began work buoing up the ship but the *Mary Rose* was far from “home and dry”. The joy of the spectators turned to horrified anxiety as, with a sickening crack, a pin broke in one of the legs of the frame causing a cable to snap. For a moment no one knew whether the hull had been seriously damaged or if the lift would have to stop. Pumps went into operation removing water from the ship, the weight of which might otherwise drag on the hull. The lift continued and, to three rousing cheers from the naval team, the whole hull, safe in its cradle and frame, swung into the air. A barge was waiting alongside and the precious burden was lowered gently onto its deck ready for

the journey to Portsmouth where the conservation team would be waiting to start work.⁵

By why, all those years ago, did the *Mary Rose* sink in the first place?

The *Mary Rose* was the pride of Henry VIII's navy. With her sister ship the *Peter Pomegranate* she served in wars against France, Scotland and Brittany. It was fighting the French that she met her end and she sank below the waves under the horrified gaze of Henry VIII himself.

In 1545 the French launched an unsuccessful invasion of England. The French crossed the Channel to the Solent and landed troops on the Isle of Wight. The English defenders sailed out of Portsmouth and at first engaged the French at long range. Neither side did much damage to the other. Then followed a calm day. The sailing ships were not very useful in such conditions but the French had galleys, ships rowed by oarsmen, which they were able to use against the immobilised English ships. As evening fell, a breeze sprang up. The *Mary Rose*, flagship of the Vice Admiral George Carew, advanced and began to turn. Then, to the horror of the king, who was watching from Southsea Castle on Portsea Island, she heeled over in the breeze. It is thought the lower gun-ports had not been closed after firing and so the water poured in but, whatever the reason, the ship sank. There were as many as 700 men aboard and only 40 escaped with their lives. It is not known, if this was really the reason why she sank, *why* the crew had not closed the gun ports. A lot of questions still remain to be answered about this terrible accident.

Something to do

This would be a good day for little ones to get out any toy boats you have and have a session with them in the bath or kitchen sink. Maybe you could even sink a toy ship and then improvise a cradle out of Lego or K'nex and bring it up by means of string! If you made toy boats in connection with the lesson for March 29th this would be a good time to get them out again.⁶ If you have a boat with a paper sail can you make it heel over and sink by (gently) blowing? Older children might like to do (or repeat) the lessons for May 10th which included making a toy submarine. This toy is also sometimes described as a toy diver. The floating and sinking aspects of this activity would go well with today's lesson if you did not do it in May.⁷

5 For 1982 TV footage of the lift see <https://www.youtube.com/watch?v=5XhbXKE6aTc>

6 If you want to make your own paper boats instructions are here: <https://www.youtube.com/watch?v=1wu5oKy4m5s>

7 Here is a demonstration of this toy made with a pen cap rather than straws: <https://www.youtube.com/watch?v=-LlecLbfF3g>.