

## VIRGIL'S GEORGICS

WILKINSON L.P.	<u>The Georgics of Virgil</u> (Omit chapter 2) [W]
PAGE T.E.	<u>Virgil: Bucolics and Georgics.</u> (Commentary on the Latin text but might be useful reference for information on names of persons, places, flowers, birds etc.) [P]
WHITE K.D.	<u>Roman Farming.</u> (No information on bee keeping).
FRASER H.M.	<u>Beekeeping in Antiquity.</u> (Copy National Library, Aberystwyth).
BUTLER C.G.	<u>The World of the Honey Bee.</u>
MACE, H.	<u>The Complete Handbook of Beekeeping.</u>

### BOOK I

The first four lines describe the contents of the four books of the Georgics: Book I cultivation of fields (agriculture), Book II management of trees (arboriculture), Book III care of animals, Book IV beekeeping (apiculture). In fact the contents of the books are at once more limited and more varied than as described. Book II for example is confined almost entirely to viticulture, but contains passages such as that in praise of Italy and on Virgil's artistic and scientific philosophy.

1. cornfields happy. The Latin word for happy can also mean fertile. Words such as these enable Virgil to create a sympathy with nature.
2. train the vine. The Latin word for train can be used of joining in marriage. The elm was often regarded as the husband of the vine.
4. frugal bees. Bees are economical in their activities. They are an example to the Roman farmer and to Roman society.
5. brightest luminaries. Sun and Moon. The list of twelve deities which starts here, to which Octavian makes a thirteenth, is probably an imitation of Varro (W. 146-7). Wilkinson considers that Virgil's deities are predominantly Greek, not the deities worshipped by Roman farmers but those recognised by literary society. He perhaps overstates.
7. kindly. Latin word alma as in alma mater. Can mean nourishing.
8. acorn. Virgil calls them Chaonian acorns. The Chaones were in N.W. Greece. Here were the oak groves of Dodona, an early religious centre and in legend abode of primitive man.
9. spring water. In fact Acheloidan cups. Achelous most ancient of rivers, again in Greece.
10. Fauns. From Latin favere hence our favourable. Humble gods of the countryside. Few of the gods on this list belong to the list of 12 major deities.
12. Neptune. God of earthquakes and horses as well as of the sea.
14. Forester. Aristæus (see Book IV). God of fields and here god of groves which afford pasture to cattle.
15. Pan. God of the wild countryside, being summoned from Arcadia in Greece. Virgil's Eclogues, or Pastorals, were poems of Arcady.

18. Minerva. Was identified with Athene the discoverer of the olive.
19. The Boy. Triptolemus, son of a king of Eleusis, favourite of Demeter. Many agricultural inventions ascribed to him, but also connected with Eleusinian mysteries.
20. Silvanus. Name derives from silva, wood.
24. V. addresses Octavian or Augustus as future deity. This was a shocking thing to do. Although it was customary to regard kings as gods in the East, it was not so in the West. Furthermore even when he had supreme power Augustus was careful to present himself as first among equals. [P.183 W. 162-5].
28. mother's myrtle. Octavian had been adopted by Julius Caesar. The Julian family regarded Venus as their ancestress. The myrtle was her plant; it was also used as a wreath in bloodless victories.
31. Iethys. Wife of Oceanus. Portrayed in the Iliad, as the parents of the gods.
38. between Virgo and Scorpio. P. 184. 'Apparently in the old calendars the Scorpion and his Claws were reckoned as two signs; later Libra 'the Scales' was introduced between Scorpio and Virgo. By assigning Augustus the place of Libra the poet suggests that he is a type of even justice.' Augustus also born under Libra.
38. The Elysian plains. In Greek mythology the abode of heroes after death. Nonetheless it was part of the underworld and seems to have been envisaged as some kind of leisure resort. Augustus will be needed in heaven. Proserpine, Demeter's daughter, was snatched below by Pluto king of the Underworld. By agreement she returned to the world above for part of the year, signifying the regeneration of plants, but she was principally an Underworld deity.
41. who know not the way. The principles of agriculture but also the way of true philosophy and religion.
47. twice has felt. Much debated line. It has been interpreted as a recommendation to leave land fallow for two years. It could, however, be advice to plough a piece of land, left fallow for one year, twice in winter, twice in summer. The Latin word for felt strictly only used of living beings [P].
48. never-satisfied. Latin word avarus (cf. our 'avaricious'), i.e. greedy. Virgilian joke?
50. plough not an unknown plain. Could also mean 'plough not the waves of an unknown ocean'. Numerous nautical associations in this book of Georgics. Helps to dramatise the account.
52. peculiar. Latin patrios, patral or ancestral. The word for cultivation (cultus) can also mean dress.
56. Imolus. In Lydia a country in Roman eyes of effeminate Orientals. Saba is Sheba, Pontus the Black Sea, the Chalybes were in N. Iran near the Caspian Sea, Elis was the state which contained Olympia. None of the articles listed as belonging to these foreign places entirely desirable. The Age of Iron is the age of war. Even prize winning mares reminds one of the Circus games which sensitive souls avoided, symbolic of city life. Castor was a nasty smelling medicine obtained from beavers.
60. covenant everlasting. Covenant recalls the treaties by which Rome built her empire. More specifically it recalls Lucretius. There are frequent echoes of Lucretius.
62. Deucalion. The Greek Noah. After the Flood he was told to throw the bones of his mother over his shoulder to recreate the human race. His mother was Earth, her bones stones. The human race is therefore hard and well-suited to farming.

a field where before you raised the bean. Bean, vetch and lupin could all be ploughed back into the ground as green manure. Rudimentary crop rotation was also practised especially in Virgil's homeland N. Italy. The Elder Pliny recognised the value of the bean for this purpose. The roots of beans are valuable nitrogen fixers.

80. Scruple not. meaning (i) be generous (ii) don't be afraid to handle muck.

95. Firing their light stubble. Italians sometimes cut corn close to ground. Here advised to leave a stubble for firing. Value of ensuing potash recognised by modern farmers.

95. Osier harrows. On Roman farming equipment see two fine books of K.D. White.

Agricultural Implements of the Roman World.  
Farm Equipment of the Roman World.

99. mastery. Latin imperat. 'To understand the force of this climax it is necessary to remember that impero is a very strong word in Latin: it is commonly used of a master giving orders to a slave, of despotic government, or of the government of subject states, but it is especially a military word and suggests the absolute power (imperium) possessed by a Roman general in the field, but which was so incompatible with civil life that he was obliged to lay it down before he could enter Rome'. [P.193].

102. Mysia. Gargarus mountain in Mysia, North West Turkey near Troy.

104. after sowing. 'after throwing the seed' military metaphor. The Roman soldier threw his short spear and followed it up to attack the enemy at close quarters with the sword.

106-110. Then lets in runnels. Adaptation of Homer Iliad 21. 257-262.

112. Grazes down. To prevent a long stalk which would break under the weight of the ear or the weather.

114. gravel sump. Where we use earthenware pipes ancients often dug trenches which they filled with brushwood or sand and gravel.

118. men and oxen. Oxen had almost human status in Roman world, but V. constantly shows sympathy between men and other animals.

119. naughty. Latin improbus, key word in the Georgics expressing absence of moderation. Here means 'unscrupulous' in 145 translated 'unremitting'. Geese eat grass and crops.

121. Strymon. The River Strymon is in Eastern Macedonia. As W. says, Cranes from the Strymon would not appear in Italy. The description is taken from Greek literature. The Strymon is well placed for a bird migration route reaching up towards the Danube and Central Europe and issuing by the side of the Athos peninsula from where birds can 'island-hop' down to the Nile or West coast of Asia Minor.

122. Gave us a hard calling. It is important to understand the philosophy or theology of the following lines. In brief God (Jupiter) created what we regard as evil in order to challenge us [W.134ff.]. This is probably a Stoic idea. The idea of men gradually progressing by experiment is Epicurean. W. p. 140 thinks the whole section owes much to Hesiod, Aratus, Lucretius (Epicurean) and perhaps Aeschylus (Prometheus).

136. Alder-trunks. Alders are a common tree on the banks of the Teifi. Formed basis of Lampeter clog industry beginning of this century. Water resistant tree.

136. Pleiads, Hyads. See any star atlas for these constellations. The Pleiads, a particularly beautiful constellation, was, because of the critical times at which it set, extremely important.

Many a night I saw the Pleiads, rising thro' the mellow shade,  
Glitter like a swarm of fire flies tangled in a silver-braid.  
Tennyson - Locksley Hall.

bright Bear is more correctly translated 'Arctos, bright radiant daughter of Lycaon'. This gives a mythological setting. Lycaon's daughter Callisto was loved by Zeus and consequently changed by Hera for revenge into a bear or by Zeus for protection into a bear. As such she was placed in heaven as 'The Great Bear', better known as the Plough, the clearest of constellations.

146. harsh necessity. Adopted by Epicureans instead of providential god as key to human progress and welfare.
149. sacred wood. see 8.
163. ponderous moving waggons. Roman waggons primitive with solid wheels. mother of harvest lit. Eleusinian mother.
166. hurdles. Used as temporary fences and also like stretchers for carrying dung etc. White R.F. Plate 30.  
Wine-gods mystical winnowing fan. In fact the god mentioned is Iacchus, son of Demeter and Zeus not Bacchus god of wine, though the two confused frequently. The fan was carried in the Eleusinian processions; symbolised separation of souls which were wheat from the chaff.  
See White Roman Farming Plate 35.
168. The construction of Virgil's plough is for Latinists the most notorious passage in the Georgics.  
See White Roman Farming pp. 174 ff.  
White Agricultural Implements etc. pp. 123ff. (excellent).  
Page 203 ff.
176. Ancient saws. Virgil constantly turning Romans to their traditions and trying to recreate the ancient order.
178. threshing floor. Origin of the orchestra in the Greek theatre.  
See White RE Plate 32.
185. manifold pests. Latin monstra, hence our 'monster'. Originally anything that excites wonder or amazement. Interesting that V. here uses it of small animals. Compare his treatment of bees.
187. walnut. Probably correct though some think V. meant almond.
194. natron. Lye and potash derived from it. Fascinating to read V.'s stress on selection and treatment of seed.
199. For a law of nature. Extremely pessimistic.
204. Arcturus. Very bright star in the constellation of Boötes. Rising and setting coincided with stormy seasons. The Kids (Haedi) three stars forming triangle in arm of constellation Auriga (Charioteer). These are located by a much brighter star Capella (She-goat). Their risings coincided with rainy season. For Serpent see 244.  
Virgil is often adopting Aratus in his astronomical lore. The information is often not entirely appropriate for Italy since Aratus was paraphrasing Eudoxus who came from Cnidos in S.W. Turkey.
207. Abydos. In the Hellespont. The use of 'oyster beds' as descriptive term hints at something slightly immoral about the ventures. Roman moralists had tendency to associate trading with greed.
212. corn poppy. Correct translation 'the poppy which is Ceres symbol'. Ceres represented with poppies whose seeds are supposed to have sedated her when she lost her daughter Proserpina.
221. Pleiads. Daughters of Atlas. Morning setting 11th November according to Pliny, 20th October according to Columella.
222. Cretan crown. Ariadne daughter of Minos, king of Crete, rescued Theseus from Minotaur. He abandoned her on Naxos. She was rescued and wed by Dionysus. Her wedding crown was made a constellation. (Corona Borealis.)

223. owe them strong personification in this and following line.
225. Mala. One of the Pleiads.
229. Boötes. Sets end of October.
233. The account of the five zones is taken from a wellknown Hellenistic astronomer Eratosthenes, who was clever enough to calculate fairly accurately the circumference of the earth and drew the first rough system of latitudes. You must imagine the five zones of the spherical earth projected on to a surrounding spherical heaven. Between the two tropical lines the belt of the Zodiac with its twelve divisions runs transversely. (slanting). Virgil combines this advanced astronomy and geography with more primitive elements. He is aware that there is an antipodes where people look on a South polar sky, but he combines this with the idea of a cylindrical earth where we live on top of the pillar and the dead live below us in the Underworld.
240. Riphaean. Rhipaean. These were a high range of mountains which were believed to exist stretching across Poland and Russia.
244. Great Snake. Long winding constellation (Draco) which weaves between the Plough, Ursa Major, and the Little Bear or Plough, Ursa Minor. The Bears don't get wet because they never set (in the Ocean).
249. Or dawn returns. Virgil imagines the sun as circling South - North instead of its apparent East - West. The South - North image derives from a primitive cosmology.
255. armed fleet. The Latin armatas most certainly means rigged or equipped here.
256. the proper time. Rules can be found in Theophrastus, one of the founders of botany, on the correct seasons for cutting particular trees. V. used Theophrastus in Book II.
261. hard tooth. The metal cover could be taken off the plough share and beaten back in to shape.
267. Corn roasted to make it easier to grind.
268. Even on festival days. The Romans had a very elaborate scheme of sacred and secular days. Originally they were very strict in their observance of these days.
269. works of irrigation. Could mean works of drainage.
274. whetstone. In fact millstone.
275. the moon herself. Perfunctory imitation of Hesiod, an allusive reference to the old almanacs.
277. Hell's pale king. A linguistic pun, of the kind Ezra Pound has in modern times made famous, on a phrase of Hesiod.
279. Typhoeus. see Prometheus Bound.
286. the ninth. Looks like advice to thieves, but indirectly to their possible victims.
289. Stubble if too dry hard to cut.
292. Torch ends pointed and split to facilitate igniting.
295. wine-must. Unfermented juice made into wine by artificial methods. In Latin the metre of the line conveys the sense of the must boiling over.
299. in your shirt sleeves. The Latin is nudus which can mean naked or lightly clad. It's a translation of Hesiod WD 391.
302. genial winter. The Roman's genius was his spiritual alter ego. To indulge one's genius meant to enjoy oneself. We may be genial at Christmas but we also try and enjoy ourselves.

309. hempen sling. V. specifies 'from the Balearic islands' modern Majorca, Minorca etc. famous for their slingers.
332. Athos. Adaptation of line from Theocritus. Athos where the Persian fleet was wrecked, Rhodope in Thrace, Acroceraunia in Epirus.
336. takes himself. lit. retires. Of the five planets then known Saturn furthest from sun and described as cold and retiring. For these reasons astrologically Saturn was a harmful planet. Mercury being nearest the sun had a circuit which could be readily observed.
341. then the lambs are fat. trans. from Hesiod WD 585 who went on to say 'then are women most wanton and men weakest'.
345. mascot. Old translation. Virgil wrote felix hostia which can be translated 'happy victim'. If the victim remained happy it was considered to bring good luck.
350. danced impromptu dances. i.e. unsophisticated, simple and hence honest. cf. Book II 380 ff.
353. The Father himself. Acknowledgment of divine providence.
378. their old complaint. Latin cecinerere querelam imitates the croaking of the frogs.
379. emmet. ant.
384. Caÿster trans. of Homer Il. 2. 461. The Caÿster flows into the sea near Ephesus. Virgil is an excellent observer of birds (v. Warde-Fowler, W. 'The Birds of Virgil' in A Year with the Birds. ). No doubt the Caÿster's fame remained in V.'s times.
396. As though she owed. Meaning the moon's light was so bright it seemed her own.
404. Nisus. P. 231. 'Nisus was a king of Megara, and when that city was besieged by Minos, his daughter Scylla fell in love with Minos, and cut off from her father's head the 'purple lock of hair' on which his life depended, so that he died and Minos took the city. Minos was so horrified by Scylla's conduct that he sailed away and left her, and while she was swimming after his ship, she was changed into a sea-bird called 'iris' and attacked by Nisus, who had been changed into a sea-eagle' (sparrowhawk?).
416. special instinct. Virgil adopts an Epicurean or materialistic interpretation of bird behaviour. There were those e.g. Stoics who believed that God's mind permeated the universe, and, since it directly controlled plants and animals, these could give providential information.
437. Glaucus. P. 234. 'Tradition states that this line is from Parthenius, a poet who taught Virgil Greek'. It is a very Greek line both in its sounds and metrical effects. c.f. Milton's use of epithets and names for musical effect.
447. Tithonus. adaptation of Homer Il. 11. 1 and Od. 5.1. Tithonus, brother of Priam, married Aurora or Dawn.
449. Such a storm - Day Lewis, like V., tries to convey the sound of the hail.  
Ian multa intectis crepitans salit horrida grando  
The rattling 't's' and 'c' come gradually to rest in the softer 'g' and 'd's'.
466. when Caësar fell. On these portents compare Shakespeare's Julius Caesar. Shakespeare used Plutarch and indeed there was a strong tradition that Caësar's death was accompanied by portents. On V.'s Caësar's sympathies see Wilkinson pp. 24ff.
490. once again. V. imagines, as did other Roman poets, that the battle of Philippi between Octavian and Brutus took place in the vicinity of the battle of Pharsalus between Caësar and Pompey. Emathia was in Macedonia about half way between the two sites. Haëmus mountain near Philippi.

496. hit upon helmets. The Latin says 'empty helmets', and the word 'empty' (inanes) has the prominent position in the line. It reinforces the idea of human mortality. It is difficult to define V.'s intentions in these lines. The Romans who slew one another in the Civil Wars were of heroic stature, and yet an age in which the plough supplants the spear is more desirable.
500. our young prince. Latin merely says 'youth' (iuvenem).
502. Laomedon. Father of Priam, who refused to pay Apollo and Neptune the wages agreed for helping to build the walls of Troy. His broken promise supposed to have caused Troy to be forever cursed. The Romans, according to the story of the Aeneid, were descended from the Trojans.
508. the labourers are taken. A problem going back to the Gracchi and beyond.
509. the East is in arms. These lines are used to try and date this book of the Georgics. In fact too general to be of much use. Page, wrongly, tries to make the East refer to Antony. In fact the East (Euphrates) and Germany were the two frontiers which for a while caused Rome most anxiety. Neighbouring cities refers to internal disturbances. These were eliminated once Octavian's rule resulted in the pax Augusta.
- Note the pessimistic end to this book. The insecurity of the Civil Wars has not disappeared.

#### GEORGICS BOOK IV

1. heavenly gift. Anciently believed that honey fell as dew from heaven and was gathered by bees in the form of the honeydew, a sticky substance found on some trees. In fact this honey-dew is a menace to good beekeeping (Mace 88.).
2. Tiny Republic. This illustrates V.'s sympathies with the animal world. Conversely he will use the bees as a political example to be observed by the Romans. This passage also illustrates a philosophical and literary point. The tiny republic is worth your admiration. Small things can be as important as big. Humble literary genres such as Georgics can be as important as grandiloquent ones such as Epic.
5. Groups. lit. peoples.
13. lizard. Pests in this country include toads, more importantly shrews, which bite off the heads of bees and can wreck colonies in hibernation, and among birds the Great Tit which sometimes is cunning enough to entice a bee out by knocking on the hive. The bird menace is overrated. V.'s 'bee-eater' is merops apiaster, a very gaudy creature.
14. The swallow. V. gives it its mythological name Progne. She slew her son to avenge herself on her husband Tereus. It's her killer hand. But see note on 510.
20. palm or tall oleaster. Beehives should be kept in shaded (though not cold) sheltered spot. When swarms emerge they hang for a while on the nearest tree or bush and that is the best time to box them.
22. the spring all theirs. P. 337 says 'as bees swarm in the spring, the spring is said to belong to them'. In fact a variety of conditions will cause bees to swarm. Generally it is when the hive has been active a while and this is usually summer. June is a bad month. Day Lewis, line 21, translates novi reges as 'new queens'. That is scientifically correct but the Latin and Virgil say 'new kings'. The role of the queen was not understood by the ancients.

27. plenty of bridges. Bees are good at judging weather conditions, but weather is not always predictable. Bees are very economical in the amount of fuel they carry for themselves. If conditions turn bad they can fail on the way home.
30. spurge laurel. Latin casia.
34. concave bark. cylindrical hives of pot have been found in Greece. The skep hive used until modern times was made of withies.
35. narrow doorway. Modern hives have adjustable doorways. When colonies are strong and working hard these are opened wide to allow mass movement. Bees can most easily protect a narrow entrance.
39. flowery pollen. The Latin is obscure fucco et floribus. Floribus is flowers but fucco, which can be used of pastes and dyes such as rouge, does not mean pollen. The bees use a sticky substance called propolis which in ancient times and increasingly in modern is also recognised as a valuable medicine, being used e.g. for infectious wounds. Bird lime was made from mistletoe. Pitch from Anatolia more exact 'pitch from trees on Mt. Ida.'
42. Underground and keep house there. Some species of bees, e.g. bumble bees have nests underground, but not European honey bees. keep house. V. humanises them by writing 'keep their Lar (i.e. household god) warm'.
45. solicitously for warmth. colonies which are cold rapidly die out. Bees dislike noise and strong smells. They will sting people wearing scent or with hands freshly washed with strong smelling soap.
64. make a tinkling noise. A swarm once it leaves your land is the property of whoever catches it. In modern times owners followed their swarms beating a piece of metal to proclaim their ownership but perhaps also obeying a piece of ancient bee-lore.
67. sallied to battle. Bees fight but not in the way described by V. Queens do not lead armies into battle. Two queens (mother and daughter, or sisters) will fight inside a hive for mastery of the hive and they make piping or trumpeting sounds. A strong colony of bees will try to steal the honey of a weaker. This can lead to spectacular fights in the vicinity of the hive, though the fighting takes place low down, and most destructively on the ground. Drones and queen bees mate high in the air. The air is full of the sound of bees on these occasions, though the bees are not easily seen. After mating the drone dies. The queen mates with several drones. The dead drones, however, could hardly be said to be thicker than hail.
87. a handful of dust. It is ironical that great epic battles can be stopped by a handful of dust. It's a grim, as well as humorous, irony since the bees' world parallels that of men.
91. gold-patinaed mail. Queen-bees, once you have spotted them among the other 60,000 bees in a colony, can appear in their small way rather magnificent. Some are prettier than others. In fact Virgil seems unwittingly to be describing two different races of bees, rather than bees of different qualities. Bees fall broadly into two groups, blacks and yellows. The British or Welsh bee is black and generally pictured as hardy and good tempered, the Italian bee is bright yellow and difficult to handle. In practice a yellow bee can cross fertilise and the colony in the course of a year become black and still remain bad tempered.
- Wilkinson 181 argues that the golden leader is Octavian, the black Antony.
107. Tear off the wings. Modern keepers sometimes clip the wings of queens. It's only one element in swarm control. The majority of bees could still swarm with a new queen leaving the clipped queen and a few bees behind.

118. I'd sing perhaps of rich (i.e. prosperous) gardens. It is a major omission. The personal garden was an important element in the life and economy of the Romans.
119. Paestum. South of Salerno in S. Italy. Famous for its temples as well as its roses.
123. Late-flowering narcissus. Some species of daffodil.
125. Oebalia P. 349. 'Oebalus was a king of Sparta, and so Oebalia is sometimes used for Laconia, but here, as the mention of the Galesus, a river in Calabria, shows it means Tarentum, which was founded by Phalanthus, a Spartan.
127. Corycian. Corycus was a city in Cilicia (S. Turkey). Pompey defeated the pirates of Cilicia in 67 B.C. and settled them in Calabria. You might consider it symbolic that a former pirate has become a happy gardener and is bringing derelict land into cultivation.
132. happy as a king. lit. 'he equalled the wealth of kings by his spirit' i.e. by his toil. Others translate wrongly 'in his mind he equalled the wealth of kings.'
140. squeezed the frothy honey. Modern extraction methods rely on centrifugal force which separates the honey from the wax fairly cleanly. A tub of newly extracted honey has a froth.
141. limes. Honey from lime trees famous but some find it insipid. His apple trees, if they blossomed well, would crop well because of the pollinating activities of his bees. Modern orchards hire bee colonies at blossom time.
145. sloes. They have limited use though ancestor of plums. In fact Latin says pruna which can refer to both sloes and plums.
146. plane. Symbol of wealth and leisure because only useful for shade. The Latin line has fine languid musical effect based on the related consonants of 'm' 'b' 'p' varied by 't'.

Iamque ministrantem platanum potantibus umbras

11. clashing brass. P. 352. 'The legend was that Cronos (Saturn) devoured his children because he knew that one of them was to depose him, but that his mother hid Jupiter in a cave of Mt. Dicte in Crete, and the priests of Cybele drowned his cries by clashing their cymbals, while the bees, attracted by the sound, provided the infant with honey.' (cf. 64).
153. They alone. Not true. Many other insects including ants show some communal discipline. The following description of the well ordered society of bees, where everyone has his job, works hard and keeps to his place in society, is naturally meant to serve as an example for Roman society emerging from its awful revolution. It no doubt owes something to Plato's Republic but also to traditional ideas on the Golden Age.
- Apart from the queen bee and drones, with their more narrowly defined sexual roles, the other bees, the workers, in their brief lives each take on a succession of jobs for a fixed period, first as nurses, waxbuilders, then guards and finally as foragers where eventually they meet their death.
160. tear of daffodil and gummy resin of tree bark. The gummy resin is in fact propolis which often sets like a tear.
166. Relieve incoming bees. It would be broadly correct to say the foraging bees store the honey. They are examined by the guard bees as they come in. The honey once deposited is moved around by bees in the hive. The foraging bees often feed the honey to other foragers, as they dance their dance which indicates the honey source.

166. Show the drones. At the end of the season they throw them out of the hive and directly or indirectly kill them.
178. The old. In fact the old are the foragers, the young stay at home.
181. Their legs laden with thyme. The bees have what are called pollen baskets on their legs. You can observe the different coloured pollens on their legs as they fly into the hive.
187. what a murmuring. You can judge whether bees have had a good day by listening in an evening to the murmuring in the hive.
191. If rain threatens. Important modern scientific work is being done on bee navigation. It will have implications for other forms of insect and bird migration.
194. carry some ballast. Not true. Page suggests may be reference to mason bee.
198. no sexual union. Since V. thought the queens were kings and didn't realise the function of the drones he could make this mistake. Little is known about the mating of bees. It is now realised that there are bee assembly points well away from hives, rather like the mating grounds of some birds and animals. Worker bees can also reproduce asexually if a hive loses its queen, and queens can reproduce asexually in which case all its offspring are drones. For V. the bees, with their apparent lack of sexuality, were all the more moral creatures.
203. bruise their wings. old bees can look very battered.
207. seven summers. A queen might conceivably live seven summers, certainly many live four, but a drone only lives a summer season and a worker only six weeks.
210. Egypt. It is difficult to assess V.'s attitude to monarchy. Egyptians, Lydians, Parthians and Medes were certainly not examples to be followed. Therefore V.'s support for a single ruler must be qualified.
213. break down the honeycombs. Bees become disorientated if they lose their queen. The colony can lose all sense of purpose and anarchy ensue; in other conditions the bees will try to repair the loss by feeding royal jelly to an embryonic bee which converts it into a queen.
216. crowd round her. The queen gives off a substance or scent which conveys her presence and confirms social cohesion. The queen is always somewhere in the middle of a hanging swarm.
220. bees partake of an Essence Divine. lit. 'bees have part of the Mind Divine and drink from the Aether.' The Aether was a refined fire, the Fifth or Quint-essence. The Stoics considered it enfolded the universe, and as such was God and the mind of God, since God was Pure Mind. And yet it was material, you might imagine it as a kind of electricity or energy, which activated and guided the Universe. Men's souls partook of this essence. Death releases the aether in man to rejoin God.
230. smoke. This is still the best method of manoeuvring bees if used sensitively.
231. Twice a year. In Britain once a year, except in very favoured localities or years when one might, for example, gather a late crop of heather-honey. One hears of four harvests in some countries.
234. rainy Fish. The constellation Pisces.
238. Bees get very angry when their honey is taken, especially if the weather is turning cold and they are all at home. A sting in the vein is terrible & leave you with a severely swollen arm, or worse. They put their whole soul into their sting because the sting rips out part of the bee's insides and it dies.

245. hornet. Hornets are a deadly menace for bees in countries such as Japan. They are much too big for bees to counter. Moths are a nuisance everywhere, since their grubs eat the comb over winter. New comb has to be made from nectar with consequent honey loss.
252. severe illness. There are numerous bee illnesses, dysentery, acarine, nosema, foul brood and chalk brood being the most well known.
267. pounded oak-apples. Oak galls are an astringent and might help combat dysentery in bees.
269. raisins from the Pythian vine. The Latin is ambiguous. He means the wine from the raisins.
271. amellus. An Aster flower common in Italy.
278. Mella. Stream near Brixia in V.'s homeland.
287. Conopus. Macedonian because Alexandria nearby was founded by Alexander and the country, Egypt, was ruled by the Ptolemies, a Macedonian dynasty.
300. stopper up. In order to hold in the blood. There was a persistent tradition that insects could be spontaneously generated from decayed matter, especially in hot countries such as Egypt.
336. Dryno, Xantho again the names are all Greek and for musical effect. As Page points out many of them are more suitable as the names of wood nymphs than sea nymphs. Dryno is from drymos - oak (cf. druid), Xantho from xanthos - yellow haired, Phyllodoce means 'leaf receiving'.
345. Chaos. Primeval, undifferentiated matter from which Heaven (male) and Earth (female) separated to begin creation.
367. Phasis is in modern Georgia, Lycus in N.E. Turkey, Enipeus in Thessaly, Anio is tributary of Tiber, Hypanis either modern Bug or Kuban in Russia, Caycus is near Ephesus, Eridanus is the Po and for the North Italians, such as Virgil, the king of rivers. The Latin says of the Po 'with two gilded horns on its bull visage'. Page surmises that rivers likened to bulls because of their roar. From that it is easy to pass on to the snow white bulls with gilded horns which were sacrificed at Rome, especially if the river is the king of rivers. The horns might also refer to the shape of the river bank and bed.
9. nappy towels, might seem a surprising phrase in a poem even one as humble as the Georgics. In fact V. says 'towels with close shorn nap' i.e. smooth finished not rough.
382. Father of the universe. Oceanus sometimes envisaged as father of gods. In some eastern mythologies, and also in Thales the first Greek philosopher, imagined as at the origin of creation.
389. two legged horses. Probably hippocamp; creatures like a sea horse.
391. Nereus - Old Man of the Sea, father of sea-nymphs; like Proteus had power to change shape.
415. ambrosia. From Greek word meaning 'immortal'. Can refer to food of the gods or ointment.
439. He rushed him. This and the following line more or less direct translation of Homer Od. 4.454.
461. Rhodope. Mountain separating Thrace and Macedonia, Pangaeus mountain in same area near Amphipolis, Rhesus was king of Thrace in the Iliad (unwarlike is misprint for warlike), the Getae were N. Thrace, the Hebrus was the main river of Thrace, Orithyia was a daughter of Erechtheus, king of Attica, who was carried off by Boreas, the North Wind, to Thrace.
467. Taenarus. Cave in the promontory of Taenarum south of Sparta which was said to lead to the Underworld.

479. Cocytus. Underworld river, name is Greek for 'lamentation'.
484. Ixion. Bound to an eternal wheel of torture for attempting to violate Hera. Commonly mentioned in descriptions of the underworld along with Cerberus, the guard dog.
488. lover. The participle amantum can be translated lover, but in its emphatic position best translated 'when a moment's madness because he loved her so much caught him off his guard'.
492. Pact. Not to look back at Eurydice as he led her from the Underworld. Merciless king is Pluto.
493. Avernus. Lake near Cumae in Italy, another entrance to the Underworld, often used as metonymy for Underworld.
500. Strymon. See Book I, 120.
510. Nightingale. Virgil writes Philomela, Procne's sister (see 14). Philomela raped by Tereus, king of Thrace, had her tongue cut out by him to silence her. She told her story to Procne, Tereus' wife. She slew her son Itys in vengeance. According to the Greeks Philomela was turned into a swallow, Procne into a nightingale. The nightingale's song is her lament for Itys. According to the Romans Philomela became the nightingale, Procne the swallow. This may be based on a false etymology which interprets Philomela as 'lover of song'. Since Philomela the rape victim lost her tongue and couldn't sing, yet other versions make Philomela the wife of Tereus and Procne her raped sister. If V. followed this version then the swallow's red throat in 14 would derive from the blood spilt when her tongue was ripped out. V. here copies simile in Homer Od. 19, 518-523.
517. Arctic. Orpheus here seems to have moved into Russia. The Tanais is the Don. Virgil doesn't care to differentiate the wilderness of Thrace and Russia.
521. Thracian Bacchants. Although Dionysus was envisaged as coming from the East his religion is peculiarly associated with Thrace. This is the setting for Euripides famous play The Bacchae. There the Bacchants rip King Pentheus to pieces.
525. Eurydice. Lines immortalised by Kathleen Ferrier singing Gluck's Orfeo.
560. great Caesar is Augustus. It refers to his progress through the East after the defeat of Antony in 31 B.C.
564. Parthenope. Old name for Naples, appropriately, for this context, derived from the name of a Siren.
565. Pastoral verse. The Eclogues, a poetic activity which was at the furthest remove from Augustus' martial activities. Tityrus is addressed in the first line of the Eclogues. It was a poetic mask for Virgil.