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Pliny's Life and Career

1.1 The Early Years

Pliny the Elder,[1] Gaius Plinius Secundus, was born in late AD 23, or early 24, during the principate of Tiberius, a period of great political unrest, mutiny within the legions, and rivalries in the struggle for imperial power.

His birthplace, Novum Comum, a town of mixed population in Transpadane Gaul[2] (northern Italy), had twice received colonists in the first century BC. Comum was one of many communities that Pompeius Strabo[3] had reorganized in 89 BC. Subsequently, as a result of raids by Alpine tribes, it received a further five thousand colonists when Caesar, under the Lex Vatinia[4] in 59 BC, resettled it and renamed it Novum Comum.[5]

There is no record of Pliny's parents, but his father's name would indicate a family of native stock. What is more important, however, is that he came from a wealthy family that belonged to the municipal governing class. With this background, he became a member of the equestrian order (*ordo equester*), open to all Roman citizens who were at least 18 years

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[1] Healy, *Pliny NH: a Selection*, pp. ix ff.

[2] See further, G. E. F. Chilver, *Cisalpine Gaul: Social and Economic History from 49 BC to the Death of Trajan* (Oxford, 1941), esp. 106 f.

[3] A Roman *legatus* who raised a considerable force on his private estates in Picenum during the Italian Wars (91–83 BC). As consul (89), he rewarded the semi-Celtic population of Transpadane Gaul by promotion to Latin status. He later suppressed the revolt of the Italian Confederacy in central Italy, while Sulla campaigned in the south.

[4] At the time of the First Triumvirate (59 BC), Caesar cleared the way for a wide programme of supplementary legislation which was submitted, partly in his own name, and partly in that of the tribune Vatinius who supported him.

[5] Suet. *Iul*. 28.

of age, of free birth, good character, and a property rating (*census*) of 400,000 sesterces. As a knight (*eques*) many opportunities were open to Pliny, and his status determined his career.

With the development of the empire, Augustus had organized a rudimentary civil service and to fill its ranks, had turned to the equestrian order, whose members had gained experience in tax-farming and other financial operations.[6] As the *equites* were likely to serve in administrative posts involving the command of troops, he restored the ancient connection between the order and military service. By the time of the emperor Claudius, *militiae equestres* were organized and the knight would normally serve for ten years. He would begin his career as the commander of an auxiliary cohort (*praefectus cohortis*), becoming, thereafter, a staff officer in a legion (*tribunus militum*). Finally he would rise to the rank of commander of an auxiliary squadron (*praefectus alae*). At the end of his period of military service, the knight was deemed qualified for appointment as a procurator.

Although, in origin, a personal agent of the emperor, the procurator soon became more clearly a state official. Procurators were fiscal agents in the provinces and could be governors of small, but not necessarily unimportant provinces. Their deployment throughout the empire gave them the opportunity to travel, to observe, and to collect information. Many of them turned to writing[7] to complement their political careers. Apart from Pliny the Elder,[8] one of the best known is, perhaps, Columella.[9]

After efficient and loyal service as a procurator, a knight could obtain one of various prefectures: of traffic, of the fleet,[10] of the fire brigade, of the corn supply, of Egypt, or, most powerful of all, of the Praetorian Guard.

Such, briefly, was the framework of Pliny the Elder's career. His own preoccupation with his status and public image, as

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[6] Cf. Joyce Reynolds, 'The Elder Pliny and his Times', in French–Greenaway, *Roman Science*, 1. [7] Beagon, *Roman Nature*, 6 ff.

[8] See Ch. 2 below.

[9] Columella was a native of Cadiz and a contemporary of the Younger Seneca (*c*.4 BC–AD 65) and Pliny the Elder. He wrote a *De Re Rustica*, (in 12 books). See further, K. D. White, *Roman Farming* (London, 1970), 26 ff.

[10] Pliny was *praefectus* of the *classis Misenensis*.

a knight, is evident from the nature of his digression on the history of the equestrian order (*NH* 33. 32 ff.). Tacitus (Ann. 16. 5), writing a generation later than Pliny (about Nero's behaviour), implies that men of municipal origin tended to favour stricter codes of behaviour than those characteristic of members of the imperial court and Roman aristocracy in the first century AD: 'People from remote country towns of austere, old-fashioned Italy, or visitors from distant provinces on official or private business had no experience of outrageous behaviour; they found the spectacle intolerable' ('sed qui remotis e municipiis severaque adhuc et antiqui moris retinente Italia, quique per longinquas provincias lascivia inexperti officio legationum aut privata utilitate advenerant, neque aspectum illum tolerare neque labori inhonesto sufficere'). The Younger Pliny (*Letters* 1. 14. 4) makes similar comments with reference to the inhabitants of Transpadane Gaul, although he is less trenchant.[11]

The evidence of material remains and artefacts excavated in the Campanian towns of Pompeii, Herculaneum, Stabiae, and Oplontis, buried by the eruption of Vesuvius in AD 79,[12] provides a picture of life in a Roman *municipium* in the first century AD. This is complemented by the commentary on social life and mores recorded by Pliny the Elder in his *Natural History* and by his nephew in his *Letters*.

Pompeii was, fundamentally, a commercial centre, as its public buildings confirm.[13] The private houses, with their peristyle gardens, suggest a life style that was comfortable, and to some extent, elegant, but not over ostentatious. Expensive materials such as coloured marble, imported woods, and other examples of luxury, appear to have been relatively rare in Pompeii. Herculaneum, by contrast, boasted many wealthy citizens in addition to artisans and fishermen.

1.2 ROME

The internal evidence of the *Natural History* itself suggests that Pliny was introduced to Rome during the principate of

[11] Reynolds, 'The Elder Pliny', 1.
[12] Vividly described by the Younger Pliny (*Letters* 6. 16. 4–20).
[13] See generally, Barton (ed.), *Roman Buildings*.

Caligula (AD 14–37), namely in the early 30s, and that his experience of Roman society, as, for example, when he attended the betrothal dinner for Lollia Paulina (*NH* 9. 117) made a lasting impression on him, as his vivid description of her jewellery shows: '… she was covered with emeralds and pearls which caught the light all over her head, hair, ears, neck, and fingers: these adornments were worth 40,000,000 sesterces!' ('sponsalium cena smaragdis margaritisque opertam alterno textu fulgentibus toto capite, crinibus, auribus, collo, digitis quae summa quadringenties sestertium colligebat.') His moral indignation at this ostentation was increased by the knowledge that these were not presents but items obtained with spoils from the provinces.

By Pliny's time, Rome had become a city of extremes. Nero's lavishly decorated Golden House[14] (Domus Aurea) and the town houses of the rich on the Palatine, provided a sharp contrast with the noisy, overcrowded tenement blocks (*insulae*) in which the poor lived: these were later, vividly described by Juvenal (*Satires* 3. 194 ff.) as poised like a house of cards … where fires are commonplace.

In the capital, Pliny was to find much to interest him in literary movements, the arts, oratory, philosophy, and science. His formal education began under the well-known soldier and tragic poet Pomponius Secundus (7. 80) 'consularis poeta' and (13. 83) 'civis clarissimus', whose biography he subsequently wrote as a debt to a friend ('munus debitum') and, possibly, to ensure his patronage.

Following the tradition of the time, an important part of Pliny's training was in rhetoric which greatly influenced his literary style,[15] for which he has been frequently criticized.[16]

The emperor Augustus had encouraged the idea that equestrian status should carry a certain obligation to seek at least one army posting. Not everyone, however, responded in the same way to this virtual challenge. Some found safe niches in administrative posts, ceremonial duties, supervisory, or non-combatant roles. This gave them the opportunity to indulge in

[14] R. Bandinelli, *Rome the Centre of Power: Roman Art to AD 200* (London, 1970), 132 ff. [15] Healy, 'Language and Style' 13 ff.

[16] From the time of E. Norden, *Die antike Kunstprosa vom VI. Jhdt. v. Chr. bis in die Zeit der Renaissance*, 2 vols (Leipzig, 1898), i. 134.

leisure pursuits, writing, or whatever seemed conducive to the good life. Some indeed continued to live extravagant lifestyles, as did an officer of Pliny's acquaintance, who carried an expensive dinner service with him on active service. 'Pompeius Paulinus', he writes (33. 143), 'the son of a knight of Rome at Arles and, descended on his father's side from a tribe that went about in skins, had to my knowledge 12,000 pounds weight of silver plate with him while serving with an army that faced tribes of the greatest ferocity' ('at Hercules, Pompeium Paulinum, Arelatensis equitis Romani filium paternaque gente pellitum, $\overline{\text{XII}}$ pondo argenti habuisse apud exercitum ferocissimis gentibus oppositum scimus').

1.3 Militia Equestris

Pliny, however, took his military service more seriously and began his public career in the province of Germany (AD 47–57) rising to the command of a cavalry squadron (*praefectus alae*).

The long accepted model of his career, supported by Syme[17] and others,[18] assigns him three tours of duty, in which he campaigned against (*a*) the Chauci (AD 47), under Domitius Corbulo, (*b*) the Chatti (50), in Upper Germany during the governorship of Pomponius Secundus,[19] and (*c*), in Lower Germany, as a colleague of the future emperor Titus (son of Vespasian), to whom he dedicated the *Natural History*. The evidence linking Pliny with the legionary fortress of Xanten (Vetera), on the Rhine—an inscription on a horse-trapping[20] (*phalera*), PLINIO PRAEF. EQ.[21]—is now confirmed and dated to the later years of his service. However, Pliny's loyalty to the house of Germanicus earned him no reward.

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[17] Cf. 'Pliny the Procurator', in *The Roman Papers of Sir Ronald Syme*, ed. A. R. Birley, 7 vols. (Oxford, 1979–91), ii. 742–73. Also 'Carrière et amis consulaires de Pline' *Helmantica*, 38 (1987), 223–31 and, with additions, 'The consular Friends of Pliny the Elder', in *Roman Papers*, vii. 496–511.

[18] For example, Reynolds, 'The Elder Pliny', 1–10.

[19] Commander of the army of the Upper Rhine *c.*50–1: cf. Tac. Ann. 12. 27. Patron of Pliny, Pomponius was also an amateur dramatist (Younger Pliny, *Letters* 7. 17. 11).

[20] *CIL* xiii. 10026. 2. J. F. Healy, 'Problems in Mineralogy and Metallurgy in Pliny the Elder's Natural History', in *Atti del Convegno di Como—Technologia, economia, e società nel mondo romano* (Como, 1980), 180.

[21] The revised reading EQ. removes any earlier doubts about Pliny's status.

During this period, Pliny wrote his *On the Use of the Javelin as a Cavalry Weapon* and began his first larger-scale work of the *History of Rome's Wars against the Germans.* The latter confirms his interest in the province.

In AD 59, Pliny returned to Rome with the intention of practising law. His activities, however, from then until the death of Nero (AD 68), of whom he was always unequivocally critical, are uncertain.[22] Attempts to explain his absence from public life and why no procuratorship was offered to him at that point in his career, tend to be inconclusive. Syme suggests that the reason was the loss of a patron (Pomponius Secundus had died), some minor indiscretion in the society of the capital, a sudden distaste for affairs, or a prescience of the dangers that lurked in the path of industry and integrity. In the light of the prevailing political climate, the last reason would seem to have been the most likely. Pliny (7. 45) writes that Nero, throughout his principate, was the enemy of mankind ('toto principatu suo hostem generis humani') and loses no opportunity to criticize his extravagance (35. 51; 37. 50). Nero's jealous and obsessive fear of all eminence of birth, or success in the military field, drove him to a policy of persecution. Added to this, his philhellenic outlook was resented by Romans generally. The Younger Pliny (*Letters* 3. 3. 5) sums up the situation, observing that Nero's attitude rendered dangerous every study of a free and elevated character ('cum omne studiorum genus paulo liberius et erectius periculosum servitus fecisset'). In such a climate, it is hardly surprising that Pliny apparently retired from public service and, keeping a low profile, devoted his talents to the safer pursuit of writing books on 'grammar'.[23]

The Neronian tyranny and catastrophes such as the Pisonian conspiracy against Nero (AD 65) involved a large number of knights as well as senators: this confirms Pliny's luck, or rather his sound judgement! On Nero's death, Pliny opportunely emerged as a partisan of the emperor Vespasian. Under him, he recommenced his public career which flourished in the new

[22] Beagon, *Roman Nature,* 3.

[23] See further A. della Casa, 'Plino grammatico', in *Atti del Convegno di Como* (1979–) *Plinio il Vecchio sotto il profilo storico e letterario* (Como, 1982), 109–15.

stability created by the Flavian dynasty. Pliny became a member of the emperor's council[24] (*amicus principis*) which meant that, when in Rome, he was expected to wait on Vespasian every morning (*salutatio*)[25] and that he might be called to attend business sessions as an adviser.[26]

Maxwell-Stuart, in a recent study of Pliny,[27] puts forward an alternative chronology from AD 53 onwards, in which he states that Pliny entered on the military *cursus* as *duovir quattuorvir*. He dates his first posting, as *praefectus cohortis* in Lower Germany under Pompeius Paulinus, to 58/9, Pliny was subsequently *tribunus militum* under Duvius Avitus and took part in a retaliatory campaign against the Frisii who had invaded and settled territory set aside for Roman veterans in the region south-east of the Isselmeer. In 61 he served with Titus (as *contubernalis*) and in 62/3 was promoted *praefectus alae*. Maxwell-Stuart suggests that he may have left the army in 65/6 but equally well could have stayed on until much nearer the start of his procuratorial career.

1.4 PROCURATORSHIPS

The evidence of Suetonius implies that Pliny held more than one procuratorship ('procurationes quoque splendidissimas et continuas summa integritate administravit').[28] Unfortunately, neither Suetonius, nor any other authority, except the Younger Pliny, who refers to his uncle's time in Hispania Tarraconensis (see below), mentions any further procuratorship.

Münzer's[29] list of four possible terms of office—in Gallia Narbonensis, Africa, Hispania Tarraconensis, and Gallia

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[24] Cf. the Younger Pliny, *Letters* 3. 5. 7 ('amicitia principum').

[25] Suet. Vesp. 4. Vespasian consulted his cabinet in the dawn hours!

[26] The Younger Pliny, *Letters* 3. 5. 9.

[27] On the chronology of Pliny's career, see further P. Maxwell-Stuart's Ph.D. thesis, 'Studies in the Career of Pliny the Elder and the Composition of his *Naturalis Historia*' (St Andrews, 1996). I have benefited from the discussion of a number of critical issues with him.

[28] C. Roth (ed.), *Suetonius* (Teubner: Leipzig, 1862), p. 300. Cf. R. Syme, *Tacitus* (Oxford, 1979), i. 61 n. 2. Pliny ran through a sequence of procuratorships ending with Gallia Belgica which made him paymaster-general for the armies of the Rhine.

[29] 'Die Quelle des Tacitus für die Germanenkriege', *Bonner Jahrbücher*, 104 (1899), 103 ff.

Belgica—although open to challenge, has generally been accepted until recently, for example, by Syme,[30] Reynolds,[31] and, with reservations, myself.[32] Syme, however, observed that the procuratorship in Gallia Narbonensis seemed the least secure.[33]

As part of his alternative reconstruction of Pliny's career, Maxwell-Stuart rejects Münzer's findings. It is not inopportune, therefore, to re-examine in detail the internal evidence of the *Natural History*, although this is, admittedly, in the main circumstantial.

1.4.1 Hispania Tarraconensis[34]

The only certain and convincingly datable procuratorship is that of Hispania Tarraconensis (AD 72–4), which the Younger Pliny confirms in his correspondence with Baebius Macer (*Letters* 3. 5. 17), referring to an offer made to his uncle for his 'notes' ('cum procuraret in Hispania'). There, Pliny served as the financial agent of the *princeps*, being in charge of imperial revenue and expenditure in northern Spain when Larcius Licinius was governor of the province. Although his nephew's reference is quite explicit let us consider what other evidence there would have been to substantiate the claim for this procuratorship, if this confirmation had not been available.

Pliny (3. 28) records the census figures for this region,[35] but it is his interest in gold-mining and processing[36] that provides

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[30] 'Pliny the procurator', in *Roman Papers*, ii. 742–73.

[31] 'The Elder Pliny', 8. On the basis of personal observations that he records, we may be sure he had visited Africa and Gallia Narbonensis (that is, in addition to Hispania Tarraconensis). He might perhaps have been to Narbonensis privately, conceivably diverging on the way to or from one of his postings in Germany.

[32] J. F. Healy, 'Pliny the Elder and Ancient Mineralogy', *Interdisciplinary Science Reviews*, 6/2 (June 1981), 166 ff.

[33] Syme, *Tacitus* 1, 61, n. 2.

[34] NH 3. 6. This province was renowned for its sources of gold: J. F. Healy, '*Greek and Roman Gold Sources*', *in Domergue, Mineria y metalurgia*, ii. 12.

[35] The figures are 240, 000 (Astures), 161,000 (Lucus), and 285,000 (Braga).

[36] See P. R. Lewis and G. D. B. Jones, 'Roman Gold-mining in North-west Spain', *Journal of Roman Studies* (1970), 182ff.; C. Domergue, 'Introduction à l'étude des mines d'or du nord-ouest de la péninsule ibérique dans l' Antiquité: Legio VII Gemina', *Coloquio internacional* (León, 1970), 235–86,

the strongest possible circumstantial proof of his presence in Hispania Tarraconensis. The vividness of his narrative, when describing a mining operation (33. 72), suggests that this is an eyewitness account.

On completion of the work, the miners cut through the tops of the arches, beginning with the last. The opening fissure gives warning of the impending collapse, but this is only seen by a watchman perched on the top of the mountain. With a shout, or a wave, the look-out gives the order for the miners to be called off and, at the same time, rushes down from his vantage point. The ruptured mountain falls asunder with an unimaginable crash and is accompanied by an equally incredible blast of air. Like conquering heroes,[37] the miners contemplate their triumph over Nature.

Peracto opere cervices fornicum ab ultimo caedunt. dat signum rima eamque solus intellegit in cacumine eius montis vigil. hic voce, nutu evocari iubet operas pariterque ipse devolat. mons fractus cadit ab sese longe fragore qui concipi humana mente non possit, aeque et flatu incredibili. spectant victores ruinam naturae.

A further vivid picture is presented by Pliny (33. 75): 'The workmen cutting out the rock hang suspended by ropes, so that, viewed from a distance, the operation seems to involve, not so much a species of strange animals, as of birds. Most hang suspended as they take the levels and mark out the route—man leads rivers to run where there is no place for him to plant his own footsteps.' ('qui caedit, funibus pendet, ut procul intuenti species ne ferarum quidem, sed alitum fiat. pendentes maiore ex parte librant et lineas itineri praeducunt, quaque insistentis vestigiis hominis locus non est, amnes trahuntur ab homine.') These scenes must surely have been witnessed at first hand.

Perhaps the most important circumstantial evidence is Pliny's knowledge of the vocabulary and terminology[38] used

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and C. Domergue, 'Apropos de Pline, *Naturalis Historia* 33. 70–8', *Archivo Español de Arte y Arquelogia*, 45–7 (1972–4). 499–548 and C. Domergue and G. Hérail, '*Mines d'or romaines d'Espagne: Le District de la Valduerna*, (*León*), (série B, vol. 4 Toulouse, 1978).

[37] Beagon, *Roman Nature*, 41: 'These *victores* are to be contrasted with the heroes who have conquered in *NH* 2. 54. Their probing of the heavens, unlike these men's probing of the earth, was righteous because it freed man by conquering his irrational fear.' Cf. also Beagon ch. II. 3.

[38] See Ch. 7 below.

by the miners—a mixed workforce—who spoke a hybrid language, a sort of lingua franca which included Greek, Spanish, and, sometimes, poorly understood Latin words.[39] The latter have often caused unnecessary emendations to the text and, for editors, needless traumas! Pliny (pref. 17) explains that his work is an update, or revision, and includes facts either ignored by his predecessors, or discovered as a result of his own experience.[40] This new material is additional to that obtained from secondary sources.

Although the evidence of book 33 suggests, in part, direct, on-the-spot experience, *nowhere* does Pliny specifically claim to have *seen* anything that he describes. Thus, judged solely by the criterion of any mention of *eyewitness* (that is, without the Younger Pliny's) evidence, his procuratorship in Hispania Tarraconensis might well have been open to question! We must conclude, therefore, that paucity, or lack, of eyewitness accounts does not preclude the possibility of Pliny having served as a procurator in any specific province. What is puzzling, however, is that, unlike Mucianus[41] who constantly refers to things he has personally encountered,[42] Pliny does not include more references to what *he* actually *saw*.

Pliny shows an interest in Hither Spain and in the Balearics, based on information from secondary sources. He describes flax at Tarraco, where cambrics were first invented (19. 10), and fabrics and other products manufactured from esparto, at Nova Carthago (19. 26 ff.). He also briefly mentions the moufflon and rabbit (8. 217): 'The animals in Spain called rabbit belong to the genus hare; their fertility is beyond counting and they bring famine to the Balearic Islands by ravaging the

[39] Pliny himself (pref. 13) highlights the problem when he apologizes for using rustic, or foreign terms—indeed barbarian words that have to be introduced with 'if you'll pardon the expression' ('aut rusticis vocabulis, aut externis, immo barbaris, etiam cum honoris praefatione ponendis'.)

[40] Especially in the field of earth sciences (mineralogy).

[41] Mucianus was consul on three occasions, namely in AD 52, 70, and 75. He was author of a work on 'Mirabilia'. See *NH* 12. 9.

[42] Among the many other things he saw when he was governor of Lycia (13. 88) was a letter of Sarpedon, written on paper, at Troy and, on another occasion, the beams of cedar of the roof of the temple of Diana at Ephesus (16. 213).

crops. … it is an established fact that the inhabitants of those islands petitioned the late emperor Augustus for military assistance against the spread of these animals.' ('leporis genus sunt et quos Hispania cuniculos appellat, fecunditatis innumerae famemque Baliarum insulis populatis messibus adferentes … . certum est Baliaricos adversus proventem eorum auxilium militare a divo Augusto petisse.') He confuses the etymology of *cuniculus*—which is derived from the Spanish word for a rabbit. From this was formed *cuniculum* meaning 'burrow', 'tunnel' and so, in a technical context, 'mine'.

1.4.2 Africa

Africa was, for the Greeks and Romans alike, a land of 'mirabilia'[43] and examples of the paranormal. Pliny and his contemporaries, no less than early writers, among whom Herodotus stands out, were fascinated by its legends and realities.[44] Many sources of secondary information were available, ranging from notes made by Hanno,[45] the Carthaginian explorer (5. 8), which were available in a Greek translation, the researches of King Juba[46] of Mauretania (5. 16 and elsewhere), and accounts brought back by Roman commanders, like Suetonius Paulinus[47] (5. 14).

Notwithstanding such sources, to which Pliny is widely indebted, his own knowledge of Africa, familiarity with African languages, and vividly descriptive accounts of many aspects of that province, its resources, and everyday life, support the

[43] Arist. *HA* 8. 28, 606^{b}20.

[44] (*HN* 8. 42) 'vulgare Graeciae dictum semper aliquid novi Africam adferre'. See also E. Bianchi, 'Teratologia e geografia', *Acme*, 34 (1981), 227–49.

[45] Of uncertain date. His *Periplus* contains an account of a voyage undertaken, beyond the Pillars of Hercules, to found settlements.

[46] In 30 BC Augustus reinstated Juba in his paternal kingdom of Numidia. He married Cleopatra (Selene), the daughter of Antony and Cleopatra. Later, in 25 BC, Augustus gave him Mauretania in exchange for Numidia which was reduced to a Roman province. Juba died in AD 19. Pliny (5. 16) writes: 'Juba was even more distinguished for his renown as a student than for his royal rule' ('Iuba … studiorum claritate memorabilior etiam quam regno').

[47] Propraetor in Mauretania in AD 42 and governor of Britain from 59 to 62, at the time of the revolt of Boudicca. He was consul in 66. After the death of Nero, in 68, he was one of Otho's generals in the war against Vitellius.

proposition that he may well have held a procuratorship there. Indeed, in many respects his treatment of Africa parallels that of Hispania Tarraconensis.

Pliny (5. 1 f.) begins by defining the boundaries of the province and describing the location of Antaeus' palace (5. 3) where the struggle with Hercules is said to have taken place. Many legends in the ancient world have their origin in fact:[48] interestingly, Pliny records such a rationalization of the story of the snake which was believed to guard the golden apples in the Garden of the Hesperides: 'A channel [5. 3] flows inland from the sea with a wandering course that, as people nowadays explain, looks like a snake guarding the place. It encompasses an island that is the only part not flooded by the tides, even though the neighbouring area is higher. On this island there is also an altar of Hercules, but nothing else, except wild olive-trees, remains of that famous grove which according to the legend bore golden apples' ('adfunditur autem aestuarium e mari flexuoso meatu, in quo draconis custodiae instar fuisse nunc interpretantur; amplectitur intra se insulam, quam solam e vicino tractu aliquanto excelsiore non tamen aestus maris inundant. exstat in ea et ara Herculis nec praeter oleastros aliud ex narrato illo aurifero nemore.')

Suetonius' report (*NH* 5. 14) confirmed earlier authorities' accounts of the region round and about the Atlas mountains:

> the lower slopes are filled with dense forests of tall trees of an unknown species: they have very tall trunks notable for their sheen and freedom from knots. Their leaves, like those of the cypress, except for the heavy scent, are covered with a thin down, from which, with a suitable technique, clothing can be made just like that derived from the silkworm. The summit of Mt. Atlas is covered with deep snow, even in summer. … Suetonius travelled beyond to the river Ger, across deserts of black dust, with projecting rocks in some places that looked as if they had been burnt—a place uninhabitable because of the heat, although it was winter when he experienced it. The Canarii live in the neighbouring forests which are full of every species of elephant, wild beast, and snake.

[48] Such as the Golden Fleece (Strabo 11. 2. 19), also guarded by a snake. Cf. Ap. Rhod. *Argon*. 4. 123–6. Healy, *Mining*, 75 f.

imas radices densis altisque repletas silvis incognito genere arborum, proceritatem spectabilem esse enodi nitore, frondes cupressi similes praeterquam gravitate odoris, tenui eas obduci lanugine, quibus addita arte posse quales e bombyce vestes confici. verticem altis etiam aestate operiri nivibus … ultra ad fluvium qui Ger vocatur per solitudines nigri pulveris, eminentibus interdum velut exustis cautibus, loca inhabitabilia fervore quamquam hiberno tempore experto. qui proximos inhabitent saltus refertos elephantorum ferarumque et serpentium omni genere Canarios appellari.

Pliny (5. 25) continues with a mention of Byzacium, in which district he claims (17. 41) to have 'seen a fertile plain which yields an increase of one hundred and fifty fold, land which, in dry weather, no bulls can plough, but which, after a spell of rain, *I have seen* being broken by a plough drawn by a wretched little donkey and an old woman at the other end of the yoke' ('contra in Byzacio Africae illum centena quinquagena fruge fertilem campum nullis, cum siccum est, arabilem tauris, post imbres vili asello et a parte altera iugi anu vomerem trahente *vidimus* scindi'). This is his only reference to having witnessed anything at first hand in Africa.

The country south of Cyrene (5. 33) is interesting: it is separated into three regions, namely (1) forest, (2) corn-growing, and (3) an area where only silphium[49] grows, forming a swathe some thirty miles wide and two hundred and fifty miles long. The corn is stored in pots called *siri*—a practice also found in Cappadocia, Thrace, and Spain (18. 306).

Pliny (18. 188) discusses the 'African city called Tacape. This is in the middle of the desert, on the way to the Syrtes and Leptis Magna, which has the exceptionally marvellous blessing of a well-watered soil. There is a spring that distributes water over a space of about three miles in every direction,

[49] See W. R. Philipson, 'Silphium: A Classical Example of Controlled Exploitation', *Illustrated London News*, 541 (8 Oct. 1949), 542. The umbelliferous silphium plant belonged to the genus *Asafoetida* and was used as medicine and as a flavouring in cooking. It appears as a type on the coinage of Cyrene. (see *British Museum Catalogue of Greek Coins: Cyrene*) from as early as the 6th cent. BC. When the province of Cyrenaica began to be ruled by short-term Roman governors they thought only of reaping the maximum profit during their office. Once the export of silphium was freed of strict control the over-exploitation of the plant led to its eventual disappearance.

giving a generous supply, although this is distributed among the population only at special fixed periods of the day.' ('civitas Africae in mediis harenis petentibus Syrtes Leptimque Magnam vocatur Tacape, felix super omne miraculum riguo solo. ternis fere milibus passuum in omnem partem fons abundat, largus quidem sed certis horarum spatiis dispensatur inter incolas.') He continues with a fascinating account of the intensive farming of the region: 'Here, underneath the palms of very great size, there are olives; under the olives are figs; under them, pomegranates; under the pomegranates are vines and, beneath the vines, corn is sown, then, later, leguminous plants and, finally, garden vegetables, all in the same year and nourished in the shade of some other crop.' ('palmae ibi praegrandi subditur olea, huic ficus, fico punica, illi vitis, sub vite seritur frumentum, mox legumen, deinde olus, omnia eodem anno, omniaque aliena umbra aluntur.')

A similar spring exists in Gallia Narbonensis which may be significant and Pliny (18. 190) adds: 'There is great difference in quality in the water supplied to irrigated places. In the province of Narbonne, there is a celebrated spring with the name Orga, in which grow plants so much sought after by oxen that they put their whole head under water to try to get them; but it is a well-known fact that those plants, though growing in water, only get their nutriment from showers of rain.' ('aquarum quoque differentia magna riguis. est in Narbonesi provincia nobilis fons Orgae nomine; in eo herbae nascuntur in tantum expetitae bubus ut mersis capitibus totis eas quaerant; sed illas in aqua nascentis certum est non nisi imbribus ali.')

Spelt grain (*alicia*) writes Pliny (8. 114) is enhanced by the addition of chalk in respect of its colour and fineness; and, when discussing Africa, (5. 115) he remarks that an ersatz form of *alicia* is made from an inferior kind of zea which grows there.

Communication by road is difficult in the province because of sabotage and Pliny (5. 38) cites the problem of the opening of the road to the Garamantes 'because brigands from that race fill up the wells with sand. ... at the beginning of Vespasian's reign [after AD 69], however, a short route taking only four days to the Garamantes was discovered.'

Pliny (5. 34) records 'houses built of blocks of salt, quarried from the mountains like stone', and elsewhere (31. 81), that, 'in the vicinity of Utica,[50] heaps of salt occur like hills; when these have hardened under the sun and moon, they are not melted [he means dissolved] by any moisture and iron cuts them with difficulty'. The circumstances and context of both references, however, make it difficult to judge whether he had actually *seen* such salt deposits, or indeed houses built from this quarried salt. In the second passage a number of occurrences are listed which, like those in Crete, Egypt, and Babylon, Pliny is certainly not likely to have encountered in his travels.

Pliny often includes local Punic, or African words. In Numidia (5. 22) for example, the Nomads carry their homes (*mapalia*) about the country on wagons—possibly giving the appearance of Romany caravans: 'mapalia sua, hoc est domos, plaustris circumferentes'. This term is also used by Sallust,[51] Livy,[52] and Lucan,[53] whereas Virgil[54] uses the variant *magalia*, a Punic word describing 'shanties' rather than mobile homes. Pliny (8. 174) employs the local African word *lalisio* for a foal, an outstanding table delicacy: 'pullis eorum ceu praestantibus sapore Africa gloriatur, quos lalisiones appellat'. In addition the occasional Greek term appears, as in the place name Hippo Diarrhytus—*Ἵππων Διαρρυτος*[55]—(9.26) and *sirus*—*σιρός*—(18. 30), a hole in which grain is stored.

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[50] Utica was second only in importance to Carthage. It was the site of the last stand made by the Pompeian party against Caesar, and where the Younger Cato committed suicide.

[51] *Iug.* 18. 8: 'aedifica Numidarum agrestium, quae mapalia illi vocant, oblonga, incurvis lateribus tecta, quasi navium carinae sunt.' Cf. also ibid. 46. 5.

[52] 29. 31: 'et raris habitata mapalia tectis'. Cf Verg. *G*. 3. 340 and Mart., *Epigr.* 10. 10. 8.

[53] *BC* 2. 89: 'vacuis mapalibus actus | nuda triumphatus iacuit per regna Iugurtae.'

[54] *Aen*. 1. 421: 'miratur molem Aeneas, magalia quondam.' Cf. *Aen*. 4. 259: 'ut primum alatis tetigit magalia plantis.'

[55] The name appears on a mosaic pavement in the Piazzale Corporazione at Ostia. The town (mod. Bizerta, Tunisia) is also featured in the well-known story of the friendly dolphin. See, for example, the Younger Pliny, *Letters* 9. 33.

In his discussion of the sources of the Nile, Pliny (5. 51) refers to the story that Juba brought a crocodile[56] from that river and placed it in the temple of Isis at Caesarea, where it was still on view in his day. ('crocodilus quoque inde ob argumentum hoc Caesareae in Iseo dicatus ab eo spectatur hodie.') The mention of Juba, the inundation of the Nile (5. 57), taken from Herodotus, and Timaeus' recondite account are reminders that Pliny is very much indebted to earlier authorities.

Fact and legend are often inextricably intertwined as in the description of Mt. Atlas and its peoples (5. 44 ff.). The following colourful account relies wholly on secondary sources.

Some authorities place the Atlas tribe in the middle of the desert and, next to them, the half-animal Goat-pans, the Blemmyae, Gamphasantes, Satyrs, and Strapfeet. The Atlas tribe is primitive and sub-human, *if we believe what we hear*; they do not call each other by names. … The Cave-dwellers hollow out caves which are their houses; their food is snake meat. They have no voice but make a shrill noise, thus lacking any communication by speech. The Garamantes do not marry but live promiscuously with their women. The Augilae worship only gods of the lower world. The Gamphasantes do not wear any clothes, are pacifists, and do not associate with any foreigner. The Blemmyae are reported as being without heads; their mouth and eyes are attached to their chest. The Satyrs have human characteristics except for their shape. The form of the Goat-pans is as commonly depicted. The Strapfeet are people with feet like thongs who naturally move by crawling.

quidam solitudinibus interposuerunt Atlantas eosque iuxta Aegipanas semiferos et Blemmyas et Gamphasantas et Satyros et Himantopodas. Atlantes degeneres sunt humani ritus, *si credimus*; nam neque nominum ullorum inter ipsos appellatio est. … Trogodytae specus excavant; hae illis domus, victus serpentium carnes, stridorque, non vox: adeo sermonis commercio carent. Garamantes matrimoniorum exortes passim cum feminis degunt. Augilae inferos tantum colunt. Gamphasantes nudi proeliorumque expertes nulli externo congregantur. Blemmyis traduntur capita abesse ore et oculis pectori adfixis. Satyris praeter figuram nihil moris humani. Aegipanum qualis vulgo

[56] The well-known Nilotic painting from Pompeii, however, illustrates alligators. Cf. D. Strong, *A History of Roman Painting* (Harmondsworth, 1976), 36.

pingitur forma. Himantopodes loripedes quidam quibus serpendo ingredi natura sit.

Building techniques provide a further interesting strand of evidence; 'In Africa and Spain [35. 169] there are earthen walls described as compacted [*formaceos*] because they are made by packing earth down between two sets of shuttering, so that the material is stuffed in rather than raised up. These last for ages, undamaged by rain, wind, or fire and are stronger than quarry stone. In Spain the watch-towers of Hannibal and turrets of earth placed on mountain ridges are still visible.' ('quid? non in Africa Hispaniaque e terra parietes, quos appellant formaceos, quoniam in forma circumdatis II utrimque tabulis inferciuntur verius quam struuntur, aevis durant, incorrupti imbribus, ventis, ignibus, omnique caemento firmiores? spectat etiam nunc speculas Hannibalis Hispania terrenasque turres iugis montium inpositas.') Pliny must surely have seen the latter during his procuratorship in Hispania Tarraconensis. He may even have encountered such walls in Africa—but this is only speculation.

There are several references to types of stones found in North Africa, among them a black variety (*anthracitis*,[57] 36. 148) and tufa, which, writes Pliny (36. 166), is the only stone in the vicinity of Carthage. However, he adds (36. 160) that selenite was recently discovered in Africa, but of an inferior quality to the Spanish variety.

Pliny (5. 37) mentions an inscription on Mt. Goriano indicating that precious stones were to be found in the vicinity: 'mons Gyri in quo gemmas nasci titulus praecessit.' Similarly, *carbunculi* (37. 95 f.), or 'red' stones, are also said to occur in Africa.

Pliny's account of Africa relies heavily on secondary sources, some of them contemporary; only once is there evidence of his being an eye-witness, but this is no decisive argument against his having held a procuratorship in Africa. However, it must be admitted that the supporting evidence is, in the main, circumstantial.

[57] This mineral is not coal (see Ch. 14, App. B), but ore which was partly magnetite (see Ch. 14, s.v.) and partly limonite (see Ch. 17.9.1–2).

1.4.3 Gallia Belgica

There are relatively few references to Gallia Belgica in the *Natural History*, and, although some of them are of great interest, they do not support the suggestion that Pliny was ever procurator in this province.

Pliny (4. 105) defines the region. 'The whole of Gaul included under the general name of Comata[58] divides into three races of people, which are chiefly separated by rivers: [1] from the Scheldt to the Seine is Gallia Belgica, [2] from the Seine to the Garonne is Gallia Celtica (also called Lyonese), and [3] from the Garonne to the projection of the Pyrenees is Gallia Aquitana—previously called Armorica.'

Pliny (8. 191 f.) mentions a type of wool employed for darning clothes and certain types of fleece for stuffing cushions.('[Lana] similis circa provinciae Narbonensis, similis et in Aegypto ex qua vestis detrita usu pinguitur rursusque aevo durat … aenis polientium extracta in tomenti usum veniunt. Galliarum, ut arbitror invento.')

The eunuch apple (*spadonia*,[59] 15. 51) is mentioned, and reeds which grow in the province have a number of uses. The reed (16. 158) 'is of slender appearance, jointed and divided with knots; it tapers gradually off to the top with a rather thick tuft of hair. This is not without value as it either serves instead of feathers to stuff the beds of innkeepers, or, in places where it grows very hard and woody in structure, as in Gallia Belgica, it is pounded up and inserted between the joints of ships to caulk the seams, holding better than glue and being more reliable for filling cracks than pitch.'('geniculata cetero gracilitas nodisque distincta, leni fastigio tenuatur in cacumina crassiore paniculae coma, neque hac supervacua—aut enim pro pluma strata cauponarum replet aut, ubi lignosiore induruit callo sicut in Belgis, contusa et interiecta navium commissuris feruminat textus glutino tenacior rimisque explendis fidelior pice.')

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[58] C. J. Fordyce (ed. & comm.), *Catullus* (Oxford, 1961), 161 (on 29. 3): 'Gallia *comata* was the unofficial term for the Transalpine province of Gaul, where the natives wore their hair long … as *togata* was used for the Cisalpine province, where Roman dress had established itself; Caesar does not use it but, in Cicero, *Philippics* 8. 27, Antony states, "Galliam … togatam remitto, comatam postulo".'

[59] On apples generally, see White. *Roman Farming*, 258–9.

'In Gallia Belgica [36. 159] a white stone[60] is said to be cut with a saw, just like wood, only more easily so as to serve as ordinary roof tiles and as rain tiles or, if so desired, for a kind of roofing known as "peacock style"' ('in Belgica provincia candidum lapidem serra, qua lignum, faciliusque etiam secari aiunt ad tegularum et imbricum vicem vel, si libeat, quae vocant pavonacea tegendi genera').

Pliny (36. 164 f.) also describes whetstones found beyond the Alps and known by the Celtic name *passernices*: repertae sunt … nec non et trans Alpis, quas passernices vocant.'

Pliny's (18. 296) reference to the use of a mechanical reaper,[61] is, perhaps, the most interesting: 'On the vast estates in the provinces of Gaul very large frames fitted with teeth at the edge, and carried on two wheels, are driven through the corn by a team of oxen pushing from behind; the ears thus torn off fall into the frame.' ('Galliarum latifundiis valli praegrandes dentibus in margine insertis duabus rotis per segetem inpelluntur iumento in contrarium iuncto; ita dereptae in vallum cadunt spicae'). The existence of such a mechanical device—originally known only from this reference in the *Natural History*—was disputed, but yet again Pliny was vindicated by the discovery of bas-relief sculptures illustrating such a device.[62] It made its appearance in north-east Gaul in the first century AD. Basically it was a 'comb' (*pecten*) mounted on wheels, with a 'grassbox'-type container.[63]

Finally, Pliny (31. 12) describes a remarkable spring the waters of which taste of iron rust—one is reminded of the Spa waters at Bath (tasting of flat irons) and of the springs at Treffiw[64] in Wales, both frequented by the Romans.

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[60] Identified as selenite, see Ch. 14, s.v. 'Lapis Specularis'.

[61] White, *Roman Farming* 182 f. and *Agriculture Implements of the Roman World* (London, 1967), and 'The economics of the Gallo-Roman Harvesting Machines', in J. Bibauw (ed.), Hommages à Marcel Renard, iii: Histoire, histoire des religions, épigraphie (Collection *Latomus*, 102.), Brussels, 1969, 807–9. A similar machine, known as Ridley's Stripper, was in use in parts of Australia during the last century (ibid. 486, n. 46).

[62] White, *Roman Farming*, pls. 36–7.

[63] A later, heavier version is described by Palladius (7. 4), writing in the 4th cent. AD.

[64] The waters at Bath and Treffiw both contain iron salts which account for the flavour.

Pliny's cursory treatment of the province of Gallia Belgica is inconsistent with any extended official contact with the region.

1.4.4 Gallia Narbonensis

The possibility that Pliny may have visited Gallia Narbonensis privately has been considered, conceivably by way of a detour on his way to and from one of his postings to Germany,[65] and indeed this is more likely than that he held a procuratorship in that province. Pliny (3. 31 ff.) defines the province of Narbonne as 'that part of Gaul washed by the Mediterranean and previously known as Bracata'. It mainly covers the region known to us as Provence.

Only two references, namely Pliny's claim (2. 150) to have seen a meteorite[66] which had fallen to earth in the territory of the Vocontii ('*ego ipse vidi* in Vocontiorum agro paulo ante delapsum') and, possibly, the vivid description of men and dolphins catching fish together (9. 29), directly attest his presence in the province. The collaboration is particularly interesting.[67]

> In the province of Gallia Narbonensis and the region of Nemausus there is a marsh called Latera where dolphins and men co-operate to catch fish. At a fixed season a huge number of mullet rushes through the narrow mouth of the marsh into the sea, after watching for a turn of the tide that prevents nets from being stretched across the channel. When the fishermen see this … their battle line appears and immediately takes up position where the fray is to commence. They put themselves between the open sea and the shore and drive the mullet into shallow water,[68] then the fishermen set their nets and lift the fish out of the water with two-pronged spears; the speed of some of the mullet enables them to leap over the barriers, but the dolphins still catch them. But satisfied for the moment with killing them,

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[65] See Reynolds, 'The Elder Pliny', 5. [66] See below, Ch. 14 App. C.

[67] Among the many stories of the relationship between dolphins and man, the best known is that recorded by the Younger Pliny (*Letters* 9. 33. 4 ff). The god Dionysus was rescued from the pirates by dolphins and is the subject of the well-known Black-figure cup by Exekias (E. A. Lane, *Greek Pottery*, (London, 1948), pl. 14a).

[68] Local fishermen employ a similar technique when fishing for tuna off the coast of north-west Africa.

the dolphins put off their supper until complete victory has been achieved.

est provinciae Narbonensis et in Nemausiensi agro stagnum Latera appellatum ubi cum homine delphini societate piscantur. innumera vis mugilum stato tempore angustis faucibus stagni in mare erumpit observata aestus reciprocatione, qua de causa praetendi non queunt retia … quod ubi animadvertere piscantes … apparet acies quae protinus disponitur in loco ubi coniectus est pugnae; opponunt sese ab alto trepidosque in vada urgent. tum piscatores circumdant retia furcisque sublevant. mugilum nihilominus velocitas transilit; at illos excipiunt delphini et occidisse ad praesens contenti cibos in victoriam differunt.

Pliny (19. 3 ff.) makes some interesting observations on flax—a plant that brings Gallia Narbonensis within three, and Africa within four, days (of Italy). He continues (ibid. 8): 'The Cadurci, Caleti, Ruteni, Bituriges, and Morini who are believed to be the remotest of mankind, in fact, the whole of the Gallic provinces, weave sailcloth, and indeed by this time so do even our enemies across the Rhine and no dress material more fashionable is known to their women. This reminds me of the fact recorded by Varro that it is a family custom among the Serrani for the women not to wear linen dresses.'

The reference to Varro is significant since much of Pliny's information about the Gallic provinces, especially with regard to trees, viticulture, grain, wheat, and agricultural practices in general is derived from secondary sources.[69] Similarly, the account of the Druids and of the parasitic plant mistletoe (16. 245 ff.), although more detailed than some previous accounts, for example Caesar's (*BG* 6. 13 ff.), follows Theophrastus' (*HP* 3. 16. 1 and *CP* 2. 17. 1) description of mistletoe. Acorn-bearing trees produce another parasitic plant, agaric (16. 33), a species of

[69] Varro (RR. 1. 1. 7 ff.), to whom Pliny is much indebted, gives an impressive list of more than fifty Greek authorities who had written on agriculture, or whose works refer to topics related to the subject. Pliny rates Cato highly (*De agricultura*). Cf. *NH* 14. 14: 'by the admission of his contemporaries, a supremely competent and unrivalled agriculturalist' ('ille aevi confessione optimus ac sine aemulo agricola'). Columella (1. 1. 12) writes that it was Cato who taught agriculture to speak Latin. Pliny in book 17 relies heavily on Cato. Altogether there are 62 quotations from Cato but only 8 from Columella. See further, White, *Roman Farming*, 18 ff.

non-edible fungus, white in colour and with a strong odour: it grows on the tops of trees and is phosphorescent at night.

Pliny (34. 3) mentions copper-mining for which there is evidence in Gallia Narbonensis—in the Sallustian and Livian mines. Caesar (*BG* 3. 21. 3) had also referred to copper-mining in the region of the Sotiates. Pliny (34. 96) describes a different way of smelting copper:[70] the ore 'is smelted between stones heated red hot, as this roasting scorches it and renders it black and friable. Moreover, they only smelt it again once whereas if this process is repeated several times, the quality is greatly enhanced.' ('in Gallia … ubi lapides candefactos funditur; exurente enim coctura nigrum atque fragile conficitur, praeterea semel recoquunt quod saepius fecisse bonitati plurimum confert.')

Finally, the linguistic evidence relating to the provinces of Gaul is inconclusive. Pliny records a number of Celtic words and technical terms[71] but these are not specifically local to Gallia Belgica, or Gallia Narbonensis. For example, terms for red marl (17. 44) derive from the Celtic word for a stone (*agaunum*) and *eglecopala*, dove-coloured marl. Some words belong to Gallia Transpadana, as *padus* which Pliny (3. 122) explains is a pine-tree; and Eporedia, which is the name of a town which comes from the Gallic word for 'a man good at breaking horses' (*eporedias*). In Gaul certain types of gold bracelets (33. 39) are known as *viriolae*.

The holding of the office of procurator was an important landmark in Pliny's career. Apart, however, from his procuratorship in Hispania Tarraconensis, the internal evidence of the *Natural History* appears only to suggest, with any degree of likelihood, one further procuratorship, namely in Africa.

1.5 Misenum

Pliny was in Italy about AD 76 and it has been suggested that he may have held the post of *praefectus vigilum*. The only certainty, however, is his appointment as admiral of the fleet stationed at Misenum, on the Bay of Naples (*praefectus classis Misenensis*). The fleet had no battle role in the Mediterranean

[70] See Healy, *Mining*, 158 ff.

[71] See below, Ch. 7. 3. 2 (end).

but acted as a transport and water-police force. The admiral's duties were mainly administrative involving responsibility for shipbuilding, repairs, victualling, and the provision of chandlery. The date of the appointment is uncertain, and, likewise, whether it involved being permanently stationed at Misenum.[72]

On 24 August 79, at the time of the eruption of Vesuvius, while going to the aid of survivors—among them Pomponianus, the son of Pomponius Secundus[73]—and no doubt spurred on by his scientific curiosity wishing to observe the volcano at close quarters, Pliny died. The dramatic manner of his death, whether from asphyxiation or from a heart attack,[74] is vividly described by his nephew (*Letters* 6. 16) in reply to an enquiry by Tacitus who was keen to hand down an accurate account to future generations. As he prophetically adds, his uncle's death would be renowned for all time if recorded by Tacitus.

1.6 Pliny the Man: His Character

Unfortunately, no statue, or portrait head, or other representation of Pliny survives from Roman times: nor is there any description of his physical appearance in extant literature.

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[72] A. N. Sherwin-White (*Fifty Letters of Pliny*,[2] (Oxford, 1969), 102) suggests that his duties, in the later years of Vespasian, were partly performed at Rome, cf. *Letters* 6. 16. 4, 'classemque imperio praesens regebat'. However, the Younger Pliny's statement that his uncle called on Vespasian each morning (*salutatio*) does not provide evidence of what office required his presence in Rome. See further Syme, *Tacitus*, i. 61.

[73] The senator whose biography Pliny wrote (*NH* 24. 56), and who was probably his patron.

[74] The Younger Pliny (*Letters* 6. 16. 19) writes, 'ut ego colligo, crassiore caligine spiritu obstructo, clausoque stomacho qui illi natura invalidus et angustus et freqenter aestuans erat'. This suggests that Pliny suffered from a condition akin to asthma. The exact cause of Pliny's death, however, apart from the obvious, immediate conclusion that he was asphyxiated by toxic fumes, has led to much speculation. Among the numerous articles, there may be cited, as representative of the arguments advanced, M. D. Grmek, 'Les Circonstances de la mort de Pline: Commentaire médical d'une lettre destinée aux historiens *Helmantica*, 37 (1986), 25–43; Y. Grisé, 'L'Illustre Morte de Pline le Naturaliste', *Revue des Études Latines* 58 (1980), 338–43; L. Bessone, 'Sulla morte di Plinio il Vecchio', *Rivista di studi classici*, 17 (1969), 166–79; C. Zirkle, 'The Death of C. Plinius Secundus AD 23–79', *Isis* 58 (1967), 553–9; and R. M. Haywood, 'The Strange Death of Pliny the Elder', *Classical Weekly* 46 (1952), 1–3. Whether Pliny died of cardiac arrest, which is the commonly held view, or some other physical cause, cannot be determined on the evidence available.

The idealized genre statue of the fifteenth century, on the façade of Como Cathedral, by Tomasso Rodari, and the engaging, well-known miniature of Pliny in his study surveying the world of Nature, from an illumination in the Harley manuscript[75] of the same century, are products of artistic imagination.

Two main sources, however, throw considerable light on Pliny's character, temperament, and attitude to life and society under the early empire: these are the *Letters* of his nephew the Younger Pliny and, of course, the internal evidence of the *Natural History* itself.

Both give a vivid and revealing picture of his idiosyncratic life style. In *Letters* 3. 5. 7 ff. his nephew writes:

> You may wonder how a busy man was able to complete so many volumes containing such detailed information; and wonder, even more, when you know that he practised as an advocate for some considerable time and died at the age of 55, and throughout the intervening years his time was much taken up with the important offices he held and his membership of the emperor's advisory council. But he combined a penetrating intellect with amazing powers of concentration and the capacity to manage with the minimum amount of sleep. … Admittedly he fell asleep very easily and would often doze and wake up again during his work. Before dawn he used to call on Vespasian [*salutatio*] (for he too worked at night) and return from the emperor to his appointed office. When he returned home he would devote the rest of his time to his literary pursuits. After a meal (which, during the day, was light and simple in the manner of people of earlier times), in summer, if he had any free time, he would often lie in the sun and have a book read aloud to him while he made notes and extracts from it. He did this for everything he read and always said that there was no book so bad that some good could not be derived from it … When travelling he felt free from other responsibilities to devote every minute to work: he kept a secretary at his side with book and notebook and, in winter, saw that his hands were protected by long sleeves so that even bitter weather should not rob him of a working hour. For the same reason also he used to be carried about Rome in a sedan chair. I can remember how he scolded me for walking; according to him I need not have wasted those hours, for he thought any time wasted if it was not given over to work. … When you consider the extent of his reading and writing I wonder if you feel that he

[75] MS 2677, fo. 1, of the 15th cent., in the British Museum.

could never have been a public official, or member of the emperor's council, or, on the other hand, that he should have achieved more, now that you know his application? In fact his official duties put every possible obstacle in his path; and yet there was nothing that his energy could not surmount.

Miraris quod tot volumina multaque in his tam scrupulosa homo occupatus absolverit? Magis miraberis si scieris illum aliquamdiu causas actitasse, decessisse anno sexto et quinquagensimo, medium tempus distentum impeditumque qua officiis maximis qua amicitia principum egisse. Sed erat acre ingenium, incredibile studium, summa vigilantia. … Erat sane somni paratissimi, non numquam etiam inter ipsa studia instantis et deserentis. Ante lucem ibat ad Vespasianum imperatorem (nam ille quoque noctibus utebatur), inde ad delegatum sibi officium. Reversus domum quod reliquum temporis studiis reddebat. Post cibum saepe (quem interdiu levem et facilem veterum more sumebat) aestate si quid otii iacebat in sole, liber legebatur, adnotabat excerpebatque. Nihil enim legit quod non excerperet; dicere etiam solebat nullum esse librum tam malum ut non aliqua parte prodesset. … In itinere quasi solutus ceteris curis, huic uni vacabat: ad latus notarius cum libro et pugillaribus, cuius manus hieme manicis muniebantur, ut ne caeli quidem asperitas ullum studii tempus eriperet; qua ex causa Romae quoque sella vehebatur. Repeto me correptum ab eo, cur ambularem: 'poteras' inquit 'has horas non perdere'; nam perire omne tempus arbitrabatur, quod studiis non impenderetur. … Nonne videtur tibi recordanti, quantum legerit, quantum scripserit, nec in officiis ullis nec in amicitia principis fuisse; rursus cum audis quid studiis laboris impenderit, nec scripsisse satis nec legisse? Quid est enim quod non aut illae occupationes impedire aut haec instantia non possit efficere?

Many fundamental aspects of Pliny's character appear in his nephew's thumbnail sketch. Noteworthy among these are his diligence, capacity for work, and utilization of every waking hour.[76] This is complemented by the more comprehensive picture which emerges from the pages of the *Natural History* itself.

Roman writers had an equivocal attitude towards leisure (*otium*). This, as Oliviera [77]writes, is often equated with idleness

[76] Pliny the Elder (pref. 19) writes, 'To be alive means to be awake' ('profecto enim vita vigilia est').

[77] Francisco de Oliviera, *Les Idées politiques et morales de Pline l'Ancient* (Coimbra, 1992), 264 ff. ('Vie de luxe et de loisir'), provides a comprehensive discussion of *otium*; see p. 301.

(*ignavia*) and seen as providing the opportunity for vices; it can also be a hindrance to the performance of one's duties (*officia*/*negotia*). A life of idleness, that is one opposite to the fulfilment of duties, merits the censure of Vespasian and Titus who appear as the guardians of good conduct (*boni mores*).

On the positive side, however, *otium* is part of a civilized way of life (*vitae lepos*).[78] So the Younger Pliny (Letters 2. 17. 1), like others, finds it is necessary, from time to time, to escape from the turmoil of Rome[79] to his Laurentine country villa, but only when he has fulfilled his duties (*peractis quae agenda fuerint*). His uncle has a positive attitude to rest and relaxation but, in keeping with his Stoic beliefs,[80] is concerned to explain how he has time to engage in literary pursuits without detriment to the fulfilment of his official duties. He writes (pref. 18), 'I am beset with duties, and pursue this sort of interest in my spare moments, that is at night—lest any of my readers should think that the night hours are given to idleness. The days I spend on you … ('et occupati officiis, subsicivisque temporibus ista curamus, id est nocturnis, ne quis vestrum putet his cessatum horis. dies vobis inpendimus …').

Pliny's belief in the work ethic, not only moulds his character and outlook on life, but determines the overall emphasis of the *Natural History*. His is a typically Roman reaction to the aristocratic ideal of leisure—inherited from the Greeks—that led, by an easy decline, to the disdain of serious effort, and to the advertising of elegant accomplishments as a pretext for sloth and emptiness.

Similarly Cicero (*Planc*. 66) writes that he spent time composing speeches when others such as Cassius were at the Games,

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[78] I have borrowed this expression from Pliny (*NH* 31. 88) where it is equated with *sales* ('wit') and implies amiability and charm.

[79] Cf. Juvenal (*Sat*. 3. 232 ff.), whose vivid descriptions of life in the capital, the noise, the broken sleep, the traffic gridlock, delapidated slum tenements, and constant conflagrations add up to a nightmare scenario.

[80] Panaetius (*c*.185–109 BC) sought to adapt Stoic ethics to the needs of active statesmen and soldiers and it was through him that Stoicism became so important an element in the life of the best representatives of Roman nobility. The later revisions of Posidonius (*c*.135–*c*.51 BC), who pursued a new natural philosophy which embraced all sciences, added further to the appeal of Stoicism. For a detailed analysis of the influence of Stoicism on Pliny's thought, see Beagon, *Roman Nature*, 26–54.

or celebrating festivals, that is, enjoying periods of leisure. (*cum otiosus sis, has ego scripsi ludis et feriis, ne omnino umquam essem otiosus*.)

Yet Pliny himself is well aware of the problems arising from official duties and writes (36. 27), 'The multitude of official functions and business must, after all, deter anyone from serious study, since the appreciation of works of art needs leisure and deep silence in our surroundings. Such leisure, however, must not be gained at the expense of one's duties.' ('officiorum negotiorumque acervi omnes a contemplatione tamen abducunt, quoniam otiosorum et in magno loci silentio talis admiratio est. …')

Pliny's attitude to imperial rule and his political views are clear. Unusually for someone with Stoic beliefs,[81] he was close to the Flavians. He accepted the system as indispensable to Rome, being at the same time grateful for the security and stability afforded by the *pax Romana*. Even so, the latter, contrary to what might have been expected, could, in some respects, be counter-productive, as Pliny observes (2. 117 f.) in his criticism apropos the decline of arts and sciences, invention, and discovery in imperial times. 'Yet nowadays, in this happy time of peace, under an emperor who takes such pleasure in promoting literature and science, absolutely nothing is being added to the sum of knowledge as a result of original research; indeed not even the discoveries made by people long ago are thoroughly assimilated.' ('nunc vero pace tam festa, tam gaudente proventu litterarum artiumque principe, omnino nihil addisci nova inquisitione, immo ne veterum quidem inventa perdisci.') He continues, 'The rewards were not greater when the ample successes were spread over many students and in fact the majority of these made the discoveries in question with no other reward at all save the consciousness of benefiting posterity.' ('non erant maiora praemia in multos dispersa fortunae magnitudine, et ista plures sine praemio alio quam posteros iuvandi eruerunt.') In other words, peace and stability do not inevitably produce positive spin-offs.

[81] The Stoics were fundamentally in opposition to the Flavians. See Healy, *Pliny, NH: A Selection*, p. xii.

Pliny, essentially a 'laudator temporis acti'—and with justification—is conscious of the importance of ongoing research and of his debt to other authorities whom he is quick to acknowledge (pref. 21).

The place of Nature in Pliny's thoughts was central to his attitude towards religion.[82] Typically Roman, this was a blend of credulity and scepticism. He abhors the popular clamour over 'the gods' and includes as one of those popular quirks the ubiquitous Fortune. He writes (7. 130), 'There is always a fear that Fortune may grow tired, and, once this is entertained, happiness has no sure foundation' ('certe ne lassescat fortuna metus est, quo semel recepto solida felicitas non est'). The examples which follow (7. 133–46) are reminiscent of the 'loci de Fortuna' so popular in the Elder Seneca's *Suasoriae* and *Controversiae*: the vicissitudes of Fortune were a commonplace beloved by the rhetoricians and worked almost to death in school exercises. Nature, concludes Pliny, is what mortals call God.

Pliny appears as a man torn between respect of knowledge and his background of rhetorical training, which he could not totally forget in spite of his dedication to science. Like Lucretius,[83] Cicero, Seneca, and Juvenal, he ridicules the terrors found in Greek mythology and uses his powers to destroy the widespread Roman belief in life after death. He disposes unequivocally of man's claim to immortality (7. 188): 'All men are in the same state from their last day forward as they were before their first day, and neither body nor mind has any more sensation after death than it had before birth. But wishful thinking prolongs itself into the future and falsely invents for itself a life that continues beyond death, sometimes by giving the soul immortality, or a change of shape, sometimes by according feeling to those below, worshipping spirits and deifying one who has already ceased to be even a man.' ('omnibus a supremo die eadem quae ante primum, nec magis a morte sensus ullus aut corpori aut animae quam ante natalem—eadem enim, vanitas in futurum etiam se propagat et in mortis quoque tempora ipsa sibi vitam mentitur, alias immortalitatem animae, alias transfigurationem, alias sensum

[82] ibid p. xiv. [83] Cf. Lucr. *DRN* 3. 37 ff. and elsewhere.

inferis dando et manes colendo deumque faciendo qui etiam homo esse desierit.')

Stoicism, which not only stressed the virtues of duty and the attainment of virtue through wise conduct, also encouraged the study of Nature, and this philosophy accorded well with Pliny's reaction to the mores and lifestyle of the early imperial period, as is seen again and again in his illuminating digressions on society.

Pliny's recurrent concern throughout the *Natural History* is for the environment.[84] His role, as an original 'Friend of the Earth', strikes a chord of immediate interest and relevance to our own society. The growth of luxury, which Stoicism defines as 'not living according to Nature',[85] the greed and materialism[86] of contemporary Romans, and their extravagant lifestyle are all anathema to him, since these are, in his judgement, the main causes of the decay of the moral standards which had formed the backbone of the Republic, as exemplified by the character of the Elder Cato.[87] The acquisitive attitude that accompanied the new lifestyle had many unwelcome repercussions. The rape of Nature, by mining and quarrying (33.1 ff.); the desire for pearls (9. 106 ff.) and precious stones to adorn the person (37. 54 ff.); 'purpurae insania', i.e. the demand for expensively dyed clothes (9. 127); the craving for exotic foods—birds for the table (10. 133 ff) and shellfish (9. 104 and 168–9); and the import of luxury goods from distant regions are a few of the many factors which, according to Pliny, precipitated the decline in Roman moral standards.

One further important facet of Pliny's character is revealed by his reaction to the Greeks and Greek culture. Like Cato, he has little time for either! His own feelings, however, appear more ambivalent, no doubt because he is often compelled to rely on Greek writers. Beagon[88] sums up as follows: 'Generally,

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[84] See Ch. 19, below.

[85] Cf. Sen. *De otio* 5. 8. 1: 'ego secundum Naturam vivo si totum me illi dedi'.

[86] Pliny states (2. 118), 'The only pleasure consists of possession and the profit motive is uppermost in life … Men, in their blind obsession with avarice [mens et tantum avaritiae intenta], do not reflect that knowledge is a more reliable means even of making profit.'

[87] The Elder Marcus Porcius Cato (234–149 BC) is constantly put forward by Pliny as a role model.

[88] *Roman Nature*, 18 f.

the omnivorous learning of the Greeks was considered to be combined with a total lack of virtue and propriety. They were wanting in dignity, seriousness, and respect for themselves and for others. They were deceitful and even mendacious, unscrupulous, and above all highly boastful about their cultural superiority to the Romans.' A few brief examples will illustrate the basis of Pliny's judgement. The *vanitas*—in the sense of 'worthlessness'—of the Greeks, their tall stories, falsehoods (5. 4), exaggeration, gullibility (8. 82), the insidious effect of Greek medicine and medical literature (29. 14), and, worst of all, their unscrupulous and immoral use of blood and marrow from human bodies (28. 4) all contribute to the unacceptability of that race in Roman eyes.

In this widely held view Pliny is typical of his times.