So, with respect to its beginning and end points, i.e. mouth and excretory orifice, the body of the sea-urchin—its internal visceral structure—is continuous. However, the internal viscera are *not* continuous with the outer shell or 'test' of the sea-urchin. Rather, it—this continuous body—is like the lantern that is lacking its encircling skin.

It turns out, then, that what is today referred to as Aristotle's lantern by invertebrate zoologists is only part of what Aristotle said was 'like a lantern without its skin'. The lantern *with* its skin, would be the analogue of a sea-urchin, *tout court*. The lantern *without* its skin is analogous to the entire internal viscera of the sea-urchin, including 'Aristotle's lantern', oesophagus, stomach, intestines and rectum.

As many historians have indicated, a preliminary to establishing a systematic science is the formulation of a uniform and consistent language by which to refer to newly discovered entities in a manner which will relate those entities conceptually to those already named and described. Studying the very beginnings of a science gives us insight into how this process begins. Often, it is through the metaphorical extension of the terms of our non-scientific language—for example, calling a spherical, spiny sea creature a 'hedgehog' and characterizing its internal structure as 'like a lantern without the encircling skin'. Aristotle's belief in the importance of studying the primary and extended meanings of words is not unrelated to his place in the history of science.

University of Pittsburgh

# An Island gem in Derby

JAMES G. LENNOX

### (PLATE XIIa)

The following note aims to bring the attention of scholars to a very fine seal (PLATE XIIa) in the collection of the Derbyshire Museum Service at Kedleston Road, Derby. My thanks are due to Mr D. Sorrell, County Museums Officer, for permission to publish this piece.<sup>1</sup>

Following Boardman,<sup>2</sup> the seal may be identified as an Island gem, probably from Melos, of the early sixth century BC. The seal was acquired in 1954 from a dealer, following its purchase at auction in London (of which no details are available), and now bears the catalogue number 833:6. It consists of a small piece of green serpentine, flecked with white, shaped to a lentoid form. 5.5 mm thick at the centre, tapering to 1.75 mm at the top and bottom, it is not perfectly round, the width being 17 mm and the height 17.5 mm. A hole is drilled across its width.

The design is of a prancing winged horse, whose lower body becomes that of a fish. Such creatures appear on three other known Island gems, *IGems* no.

<sup>1</sup> I would also like to express my thanks to Prof. W. G. Lambert for his identification of the seal, and his subsequent help in my investigation of Island gems, to Prof. Boardman who brought the Budapest seal to my attention, and made several comments on this short notice, and to Mr G. Norrie of the Department of Ancient History, Birmingham University, for the excellent photograph.

<sup>2</sup> J. Boardman, Island Gems: A Study of Greek Seals in the Geometric and Early Archaic Periods, Soc. Prom. Hell. Stud. Suppl. Paper x (1963) ('IGems'). 291 (illustrated as AG pl. 5.21),<sup>3</sup> IGems no. 292, and a seal from Budapest which appears in the Bulletin du Musée Hongrois des Beaux Arts 32-3 (1968) 16 no. 8 fig. 20.<sup>4</sup> More common are winged goat-fish (IGems nos 248, 249, 251 and 253A, pl. 9), but no suggestion has been found as to the meaning of such composite figures.<sup>5</sup>

As to the date of this particular seal, Boardman notes three main stages of development in Island gems. It is clear that this seal belongs to the highest development of the series, his Class D seals, and is therefore to be dated to around 600 BC, or to the early sixth century. Boardman states (*IGems* 85) that the finer Class D seals were the work of no more than two artists. If this is the case, we would attribute this seal to the artist of group 6(j) (*IGems* 87), called by Boardman the 'Blind Dolphin Master'. Our seal bears strong similarities to *IGems* no. 251, notably in the shape of the animal's eyeless head, the execution of the mane, legs and tail, and the way in which the animal has been shaped, in order to fill the field.

59 Rockingham Close, Allestree, Derby J. A. Peat

<sup>3</sup> A. Furtwängler, Die antiken Gemmen (Leipzig 1900).

<sup>4</sup> See also JHS lxxxviii (1968) 5 no. 291.

<sup>5</sup> For later Greek and Persian winged horse-fish, see Boardman, Greek Gems and Finger Rings (London 1970) figs 788–9, 979 (p. 437 f., nos 362–4).

# Athena Parthenos: a nineteenth-century forger's workshop\*

### (PLATE XIIb-e)

While piecing together information on some of the copies of the Athena Parthenos for the recent congress in Basle, I looked again with slightly wiser and perhaps sadder eyes at a small terracotta from the collections of the Manchester Museum that I had published in this journal some eleven years ago (PLATE XIIb). I found her interesting because apart from such features as the triple-crested helmet, the snake lurking within her shield, and the Nike poised upon her right hand, which identified her beyond doubt as a copy of the Parthenos, she rested her right hand on a plain column with torus mouldings. There is another figurine from the same mould in the museum in Geneva, and a third from a parallel mould in Exeter, and I concluded that they were Romano-Gallic 'souvenirs' of the second century AD.<sup>1</sup> I was convinced of the authenticity of the type, not least because of the pedigree of the Geneva figurine. However, several scholars have had their reservations, right back to the first appearance of the Geneva

\* I touched on these forgeries at the Basle Parthenon Congress, and have benefited enormously from discussion with my colleagues at the time though my particular thanks must go to Prof. Ernst Berger; the responsibility for the final result of course rests with me. The following abbreviations are used: Leipen: N. Leipen, *Athena Parthenos. A Reconstruction* (Toronto 1971); Prag: A. J. N. W. Prag, 'Athena Mancuniensis. Another Copy of the Athena Parthenos', *JHS* xcii (1972) 96–144.

<sup>1</sup> Manchester Museum 20,001; Geneva, Musée d'Art et d'Histoire 7464; Exeter, Royal Memorial Museum 5/1946/778; Leipen 11 nos 42, 44, figs 44, 45; Prag 96–102, pls XIX–XXII.

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example,<sup>2</sup> and so at the initiative of Dr R. A. Higgins the Manchester figure was tested for thermoluminescence at the Research Laboratory of the British Museum. These tests were followed by others carried out at the Oxford Research Laboratory for Archaeology and the History of Art on the Geneva figure, and at the British Museum on the one in Exeter. The technique and the results are described by Dr S. E. G. Bowman in an appendix to this note: here it is sufficient to say that in all three cases the tests rather disappointingly showed only that none of the figurines had been fired to a high enough temperature for the technique to be able to give a date for their manufacture.<sup>3</sup> While not in themselves proving the falsehood of the figurines, the results of the TL-tests certainly strengthened the case of the doubters, for one knew of no parallels for them among terracottas judged to be authentic on other grounds, and both Dr Bowman and I noticed a somewhat suspicious freshness of feel and smell about the Exeter figure.<sup>4</sup>

Our suspicions were confirmed by Mr D. M. Bailey, who adduced some alarmingly close parallels among a group of lamps in the Greek and Roman Department of the British Museum (and elsewhere) which one might politely describe as 'souvenirs' too.<sup>5</sup> Not only is the fabric very similar to that of the figurines, but the group has a penchant for themes from classical sculpture, and for descriptive inscriptions such as those found on the bases of the figures. Four are particularly germane to the Parthenos terracottas:

(I) 1909.6-19.4: a seven-spouted lamp with reliefdecoration showing a naked man restraining a bull and watched by another cloaked male, clearly copying the youth on slab XXXIX of the south frieze of the Parthenon, but with the watcher based on one of the turning figures on the next slab rather than the forward-looking, gesticulating young man on slab

<sup>2</sup> W. Deonna, 'Une nouvelle réplique de l'Athéna Parthénos', *REA* xxi (1919) 20–6.

<sup>3</sup> I am most grateful to the Trustees of the British Museum, and to Dr Higgins, Mr B. F. Cook, Dr A. E. A. Werner and Dr M. Tite for their permission and assistance in having the tests carried out on the Manchester and Exeter figures, and to Mrs M.-A. Seeley and Dr S. G. E. Bowman for performing the actual tests; to Miss S. M. Pearce, Curator of Antiquities at the Royal Albert Memorial Museum, Exeter, for allowing tests to be made on that figure; to Mile C. Dunant and Mr F. Schweizer of the Geneva Museum for making similar arrangements for their figure, and to Dr M. J. Aitken and the Oxford laboratory for carrying out the tests. A second figurine in Exeter, like the first from the Montague collection, no. s/1946/592 (Leipen 11 no. 45: inv. no. incorrectly given), already condemned by Dr Higgins as a forgery on archaeological grounds but iconographically related to the first, could unfortunately not be made available for comparative tests.

<sup>4</sup> The problems of dating and firing temperatures arising in the notorious Glozel affair were hardly reassuring: see H. McKerrell, V. Mejdahl, H. François and G. Portal, 'Thermoluminescence and Glozel', *Antiquity* xlviii (1974) 265–72 (esp. 268) and xlix (1975) 267–72, with refs; *id.*, 'Etudes sur Glozel' in *Rev. Arch. du Centre* lvii–lviii (1976) 5–30; most recently V. Mejdahl in *Archaeometry* xii (1980) 197–205 (I owe these references to Dr J. Tate of the National Museum of Antiquities of Scotland, Edinburgh).

<sup>5</sup> D. M. Bailey, 'Roman Lamps—Reproductions and Forgeries', *Museums Journal* lx (1960) 42, 44 fig. 5c-d, g. The whole group will be fully published by Mr Bailey in *BMC Lamps* iii, but I am most grateful to him for drawing my attention to the lamps, for discussing them with me in detail, and for allowing me to describe them here. Another ex-Wellcome lamp from the workshop has now come to Manchester: woman moving left, ? naked man moving right. *Cf.* Ephesus, XXXIX itself.<sup>6</sup> The fabric of this lamp is virtually identical to that of the Manchester and Exeter figures, and it is clearly unfired, or fired to a low temperature only.

(2) 1933.10-21.2 (PLATE XIIc): a single-spouted lamp, roughly ovoid in plan with a lug-handle (not an ancient shape). Very heavy, because the lower section is too thick, rendering the wick-hole inoperative, and of coarse reddish-brown clay similar to the Manchester Athena. The discus is slightly hollowed, and decorated in relief with Odysseus and Athena killing the suitors, a third figure crouching before them. The figures stand on a raised line, but otherwise there is no decoration inscription under base for save an the ΒΑΣΙΛΕ|ΟΥ|ΑΛΕΞΑΝ̈́|ΔΡΟΥ.7

(3) 1945.7-9.13 (PLATE XIId): of similar fabric and form to the preceding; very heavy though not actually non-functional but the top and bottom are beginning to part company. The wick-hole is flanked by volutes, and the discus decorated in relief with an Amazon killing a Greek, copying the right-hand group on slab 538 of the Bassae frieze, although the lamp-maker has 'improved' the original by restoring a scabbard (?) in the Amazon's left hand, not shown in the earliest publications nor in more recent ones. Below their feet is a raised panel with an illegible inscription, and there is a nonsense inscription under the base.<sup>8</sup>

(4) 1982.3-2.51 (ex-Wellcome Collection R1843/ 1936) (PLATE XIIe): of similar form to the last two; the clay is rather softer and more orange (as no. 1). The discus is surrounded by olive-sprays in relief, and is decorated with a rather worn frontal figure of Athena of Promachos type, a shield in profile on her left arm with large central gorgoneion and a spear held vertically in her right. She wears a sleeved stola, belted below the breast, and there are traces of a short wide aegis with central gorgoneion. Over the dress she wears a palla that hangs down in front of her legs. Beside her left leg a prominent, rather snake-like zig-zag fold: it is not clear to me (nor probably to the maker) of which garment this is meant to form part. On her head she apparently has a large single-crested helmet (very worn). Below, on a raised band,  $A\Theta E$  in relief, which is repeated under the base.

These lamps form a homogeneous group, then, but are false, on grounds of technique, unusability, shape, theme and inscriptions: quite independently of my own problem, one (no. 2) had been thermoluminescencetested in the Research Laboratory and had produced a similar 'non-date' to the figurines (see Appendix). None has any provenance, although one in the Benaki collection decorated with an Arimasp fighting a griffin was bought in Alexandria, and some parallel pieces were apparently acquired in Cairo. The oldest pedigree of any of the British Museum lamps goes back to 1909. Mr Bailey has suggested Greece as the place of r

#### Artemisium column?

<sup>6</sup> Museums Journal lx (1960) 44 fig. 5g; M. Robertson and A. Frantz, The Parthenon Frieze (London 1975), south frieze slabs xxxix-xi; F. Brommer, Der Parthenonfries (Mainz 1977) 100–2, pls 154–5, 158–9, 162. <sup>7</sup> Museums Journal, loc. cit. fig. 5d.

<sup>&</sup>lt;sup>8</sup> Ibid. fig. 5c; Ancient Marbles in the British Museum (London 1820) pl. xix: A. H. Smith, BMC Sculpture i 286 no. 538; C. Hofkes-Brukker and A. Mallwitz, Der Bassai-Fries (Munich 1975) 85-6, H21-538 (illus.). Mr Bailey tells me of a similar lamp in the Leicester Museum, decorated with figures from the other end of the same frieze.

manufacture,<sup>9</sup> but in discussion he tells me that this is a hypothesis only.

The argument that the terracottas derive from the same workshop is again based on their technique (confirmed by the TL-results), theme and inscriptions. It will not have escaped notice that the ex-Wellcome lamp appears to show another Phidian Athena, perhaps based on the Imperial coinage of Athens; nor that this Athena wears the Romanized dress of the terracottas.<sup>10</sup> Nonetheless, two points still need to be answered if these terracottas are convincingly to be shown up as fakes after all, points which were argued most vigorously by Deonna in his original defence of the Geneva figure, namely their provenance and the presence of the column.11

The Manchester figure has no provenance, and its known history does not go back far beyond 1933. The Exeter Athena came to the museum in 1946 from the Montague collection, where it was recorded as 'found on the Athenian Acropolis' a type of provenance that easily attaches to objects of this kind and which can be discounted, though it may indicate that the figure was acquired in Athens. However, the circumstances of the finding of the Geneva statuette are more complex: it was acquired by the Musée d'Art et d'Histoire in 1916 from a local family, on whose land at Bassy, south-west of Geneva, it had allegedly been found as early as 1870, although this date is only founded on the fact that in 1916, when she was fifty-five years old, the eldest daughter of the owner gave the museum a written declaration (why was this thought necessary, one wonders?) that she recalled seeing the figure in her parental home ever since she was a child.<sup>12</sup> While there is per se not the slightest reason why a terracotta of this type should not have been forged as early as 1870 or before, it was the decade 1870–80 that saw the excavation and then the great vogue of the Tanagra figurines, rapidly followed by their widespread imitation.<sup>13</sup> Our Athenas are no Tanagras, but here is a contemporary source of inspiration, at least, while the arguments for authenticity based on the owners' humble but honourable circumstances, and their lack of antiquarian interests and of initiative in disposing of the figure are of course purely circumstantial, and all too familiar to museum curators trying to establish firmly the reliability of their records (experto credite).

Deonna-and I myself, following him-made much of the presence of the column on these figurines, in relation to the date of the discovery of the Geneva figure, since the first copy in the round to have the column was the Varvakeion statuette, discovered in 1880. In view of the new evidence against the authenticity of the terracottas, I no longer find this so

9 Bailey (n. 5) 44.

<sup>10</sup> G. M. A. Richter, Sculpture and Sculptors of the Greeks<sup>4</sup> (New Haven etc. 1970) 216–17, fig. 594; F. Imhoof-Blumer and P. Gardner, Numismatic Commentary on Pausanias (London 1887) pl. Z nos 1-11. That the identification of this type with the Promachos has been disputed, e.g. by L. Lacroix, Les Reproductions de statues sur les monnaies grecques (Paris 1949) 281-6, and by the authors quoted by Richter, loc. cit. n. 13, is immaterial to the present discussion. On the fondness of the lamp-maker for imitating coin-types, Bailey (n. 5) 42. On the Romanized dress, Prag 99.

<sup>11</sup> REA xxi (1919) 20–6, summarized at Prag 96–7.

<sup>12</sup> Deonna (n. 11) 22.

<sup>13</sup> On the history of forged Greek terracottas, e.g. O. Kurz, Fakes: a Handbook for Collectors (London 1947) 144-8.

compelling. First, the date of 1870 for the discovery of the Geneva figure does not seem to me proven beyond question. Second, the Berlin relief, which has the column clearly indicated, was published by Bötticher in 1857 in an article in which he actually argued for the existence of the column on the basis of the relief, while Michaelis illustrated and discussed it in 1870-1, in a section of Der Parthenon where he lists the various reconstructions proposed since the beginning of the nineteenth century, and appears to come down in favour of the column as an essential concomitant to the Nike.<sup>14</sup>

Judging by some of his other productions, our forger (about whose place of work I am no clearer) must have had access to the relevant literature of his time, and this, or one of the Asia Minor coin-types that feature a support, may well have been his source. Perhaps it would be kinder, and nearer the truth, to think of him as an informed maker of souvenirs, not altogether unlike some of the better makers of Greek vases 'after the antique' today. Finally, those very technical reasons that encourage some, like myself, to believe that Phidias included a column in the original apply equally forcefully to a small clay version, particularly one that is not going to be properly fired. It is noteworthy that although none of the other regular terracotta versions of the Parthenos has a column, none of them includes a Nike either, so that such a support is less important anyway.15

The Manchester Museum

# A. J. N. W. Prag

### Appendix: the Thermoluminescence Tests

Thermoluminescence (TL) applied to the dating and authenticity testing of ancient ceramics is a well established technique.16

Thermoluminescence is the light given out by non-conducting crystalline materials as a result of exposure to radiation and subsequent heating. In pottery the crystalline inclusions, such as quartz and feldspars, are responsible for the TL. The radiation results from minute quantities of radioactive impurities in the pottery itself and in its immediate environment. The TL signal measured in the laboratory is related to the time elapsed since either the formation of the crystalline inclusions or since they were last fired to a temperature of about 500°C or above. The dating of pottery by TL is therefore only possible due to the removal during firing by man of the effect of previous radiation over geological time. The TL signal is then proportional to the age of the pottery. When a ceramic is fired to a temperature which is not sufficient to remove the effect of previous radiation, the TL signal is normally in saturation, i.e. addition of a laboratory radiation dose prior to heating does not enhance the TL signal. In such cases, TL cannot be used to determine the authenticity or otherwise of the object.

Samples weighing approximately 20 mg were drilled from the Athenas belonging to Manchester and Exeter

14 Archäologische Zeitung xv (Sept. 1857) 66–7, pl. cv; A. Michaelis, Der Parthenon (1870-1) 272-3, 279-80, pl. xv; Leipen 9 no. 35, fig. 37.

<sup>15</sup> Leipen 11–12 nos 43, 46–8, figs 46–7; contrast Prag 108–9, pl. XXIII (Romano-Egyptian terracotta of Athena). <sup>16</sup> E.g. M. J. Aitken, 'Thermoluminescence and the Archaeolo-

gist', Antiquity li (1977) 11-19.

Museums (Brit. Mus. ref. BMT 131 and 449 respectively; the former was tested by Mrs M.-A. Seeley). In both cases, the TL signal was in saturation indicating insufficient firing during manufacture. These findings were confirmed by the observation of kaolinite in the X-ray diffraction patterns of the samples. Kaolinite only remains in low fired ceramics. A sample from the pottery lamp no. 2 above (BMT 300) produced similar results. It was not possible, therefore, using TL to determine whether or not these three objects are of ancient manufacture.

S. G. E. BOWMAN

Research Laboratory, The British Museum

# Theophrastus on fungi: inaccurate citations in Athenaeus

Ancient authors often cited each other inaccurately through misunderstanding or carelessness; and this can cause problems in the collecting of fragments of authors of whose works some, but not all, survive. For a distinction has to be made between inexact citations of extant works and citations which, although resembling such works, do in fact seem to derive from material now lost. Such problems occur repeatedly in connection with the botanical writings of Theophrastus;<sup>1</sup> and one particular group of problems stems from a section in the epitome of Bk ii of Athenaeus.

At Deipn. ii 61-2 Athenaeus attributes to Theophrastus five passages in all concerning fungi.<sup>2</sup> Of these five, the first (Thphr. fr. 168 Wimmer) is explicitly cited as from Theophrastus' *Historia Plantarum*; it is not, however, in the transmitted text of that work. Neither is the fifth passage, which is the longest (Thphr. fr. 167 Wimmer); Regenbogen, following Rose and Wellmann, thought it might have been taken by an intermediary, perhaps Pamphilus, from another work of Theophrastus. The other three passages, the second, third and fourth, all derive from the HP; but in each case there are inaccuracies or alterations.

Passage (2) in Athenaeus reads:  $\phi\eta\sigma i$   $\delta\dot{\epsilon}$  ( $\delta$ Θεόφραστος) καὶ ὅτι ἐν τῇ περὶ Ἡρακλέους στήλας θαλάσση δταν ύδατα πλείω γένηται, μύκητες φύονται πρός τη θαλάσση, οΰς και ἀπολιθιοῦσθαι ὑπὸ  $\tau o \hat{v} \dot{\eta} \lambda i o v \phi \eta \sigma i$ . '(Theophrastus) also says that in the sea around the Pillars of Heracles, when there is more water, fungi grow by the sea, and these, he also says, are turned to stone by the sun.' This corresponds closely to HP iv 7.2, except that Theophrastus located this phenomenon by the Red Sea and not near the Pillars of Heracles. There is, however, a reference to the Pillars shortly before this passage in the HP, and it seems likely that Athenaeus, or his source, was misled by this.<sup>3</sup> The 'fungus' referred to in this passage is probably coral;<sup>4</sup>

<sup>1</sup> The present note reflects studies undertaken as part of a project, organised by Prof. W. Fortenbaugh, to collect and edit all the fragments and testimonia relating to Theophrastus.

Deipnos. i 414. <sup>4</sup> Cf. A. H. R. Buller, 'The fungus lore of the Greeks and Romans', Trans. Brit. Mycological Soc. v (1914-16) 47-8.

and the words 'when there is more water' may well simply refer to tides.

In passage (3), Athenaeus cites Theophrastus as referring in HP to 'smooth-skinned (plants), like the  $\ddot{\upsilon}\delta\nu\sigma\nu$ ,  $\mu\dot{\upsilon}\kappa\eta s$ ,  $\pi\dot{\epsilon}\zeta\iota s$  and  $\gamma\epsilon\rho\dot{\alpha}\nu\epsilon\iota\sigma\nu$ '. Theophrastus at HP i 6.5 gives a list which appears in the MSS as 'ΰδνον, μύκης, πύξος, κράνιον'. The scholiast emended πύξος to  $\pi \epsilon \zeta_{15}$  and  $\kappa \rho \dot{\alpha} \nu_{10} \nu$  to  $\gamma \epsilon \rho \dot{\alpha} \nu \epsilon_{10} \nu$ , probably on the basis of the passage in Athenaeus; for  $\gamma\epsilon\rho\dot{\alpha}\nu\epsilon\iota\sigma\nu$ Wimmer, followed by Hort (Loeb, 1916) preferred κεραύνιον (see below).

What is striking, however, is that the list, which Athenaeus quotes as concerned with smooth-skinned plants, is in fact clearly given by Theophrastus as a list of plants with no roots. Once again, as with the Pillars of Heracles, the term 'smooth-skinned' *does* appear shortly before in *HP*, but in a different context.<sup>5</sup> Athenaeus' account again seems to reflect error resulting from an over-hasty compression.

The discrepancy becomes significant, however, if one tries to identify the plants named. Thus Hort, for example, identified ὕδνον as Tuber cibarium Sowerby and κεραύνιον as Tuber aestivum Vitt.<sup>6</sup> In fact, these are both names for a single species of subterranean fungus, a member of the large group commonly called truffles; and the most obvious feature of this species is its markedly warty exterior-so that, if Athenaeus (or his source) had a specific plant in mind, rather than mechanically reproducing Theophrastus' words without attention to the implications of his altered text, it cannot have been this one. Conversely, Houghton based his identification of  $\pi \epsilon \zeta_{1S}$  as the giant puff-ball (Lycoperdon giganteum, Lycoperdon bovista L., i.e. Langermannia gigantea (Pers.) Rostkovius) on the fact that Athenaeus includes it in a list of smooth-skinned plants;<sup>7</sup> but his doing so seems to be the result of an accidental error, and we cannot be sure that he was conscious of the implications. It seems clear that the fungi mentioned by Theophrastus and by Athenaeus cannot now reliably be identified to species level, so that it is more sensible to follow Buller and Maggiulli in regarding  $\delta v \sigma v$  and  $\pi \epsilon \zeta \iota s$  as non-specific names for truffles and puff-balls respectively, and μύκηs as a general name for fungi.

Passage (4) raises more problems than any of the others. Athenaeus here cites Theophrastus as referring to 'the  $\delta v \sigma v$ , which some call  $\gamma \epsilon \rho \delta v \epsilon \iota \sigma v$ , and any other underground (plant)'. In fact, at HP i 6.9 Theophrastus refers to 'the usivov, and what some call asxiov, and the oüiyyov and any other underground (plant)'.

The first problem concerns the word yepáveiov. This (as the name of a fungus, and not to be confused with γεράνιον, the flowering plant) occurs in Greek only in our Athenaeus passages (3) and (4) and in a passage in Eustathius (in Hom. Il. xv 302, p. 1017.19) which is clearly dependent on (4). It is, however, also found in a Latinized form in Pliny the Elder, in a text (NH xix 36) which is very close to passage (5) in Athenaeus, though it does not mention Theophrastus by name. However, the text of the passage in Pliny is disputed. The fungus to which he refers appears as geranium in two MSS

<sup>5</sup> i 5.2; Schweighaüser 415. Smoothness of roots is mentioned in i 6.4; G. Maggiulli, Nomenclatura Micologica Latina (Genoa 1977) 117.

<sup>9</sup> Loeb, ii 481 and ii 456 respectively 7 'Notices of fungi in Greek and Latin authors', Annals and Magazine of Nat. Hist. ser. 5 xv (1885) 35; Buller (n. 4) 54-5.

<sup>&</sup>lt;sup>2</sup> Cf. O. Regenbogen, 'Theophrastos', RE suppl. vii (1940) cols 1444-5. <sup>3</sup> As was pointed out by Schweighaüser, Animadv. in Athenaei



(b) Athena Parthenos, Manchester Museum.

(c)-(e) Forged terracotta lamps, British Museum.