The Dalenpatius Hoax

In 1699, five years after Nicholas Hartsoecker published his iconic (and hypothetical) picture of the presumed *homunculus* in human semen, the French attorney and amateur naturalist François de Plantade (1670–1741) of Montpellier launched one of the most successful practical jokes in the history of science by claiming not only to have seen the spermatozoon in human semen but also the "human body" (*corpus humanum*) locked up inside it.[1] Plantade had studied law at Toulouse (1688–1692). Later, in 1698 and 1699 he traveled in England and the Netherlands, where he became friends with Pierre Bayle, the founding editor of the *Nouvelles de la république des lettres*. On his return to Montpellier, Plantade dabbled in natural history, literature and various areas of geography, physics and mathematics. He seems to have made some minor contributions to science and is mentioned occasionally in the *Proceedings* of the Academy of Sciences in Montpellier. He was important enough to receive an "eloge" upon his death.[2]

Using the Latinized anagram *Dalenpatius* (= Plantade+ius), Plantade wrote a short letter in Latin to the "author" of the *Nouvelles de la république des lettres*[3] in which he described his observations of human semen and accompanied them with four illustrations; the letter and the figures were published in the issue for May 1699 (pp. 552–555).

In the letter Plantade first established his credentials as a serious microscopist by giving a description of the crystals of spermine phosphate, which had been discussed by Antoni Leeuwenhoek (1632–1723) in his very first letter to the Royal Society on *animalcula* in human semen. Plantade also provided a drawing of the crystals with more detail than Leeuwenhoek's.[4] He then provided a picture of a spermatozoon as well as two drawings of the *corpus humanum* contained within it, complete with what looks like a sleeping cap – which he claimed to have observed as it shed its enclosing skin. After the report was

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[1] The picture of the homunculus that Nicolaas Hartsoeker published in his *Essay de dioptrique* (1694, 229-30) represented the "little animal" as it *would* look if one *could* actually see it: "si l'on pouvoit voir le petit animal au travers de la peau qui le cache, nous le verrions peut-être comme cette figure le represente, sinon que la tête seroit peut-être plus grand à proportion du reste du corps, qu'on ne l'a dessinée icy…" Hartsoeker never claimed actually to have seen anything inside the spermatozoon. The fact that his picture is still taken to be what it was never intended to be is itself an interesting phenomenon. Although the little man in the sperm was occasionally called a "homunculus" in this period, none of the turn-of-the-century protagonists of this particular story, to my knowledge, actually use this term.

[2] Desgenettes 1811 (pp. 81–92): "Éloge de M. de Plantade, par M. [Étienne-Hyacinthe] de Ratte": "Il avoit fait à la Haye une étroite liaison d'amitié avec Bayle, et il a toujours avoué qu'il devoit beaucoup à ses lumières et à sa conversation" (pp. 83/4). The *éloge* makes no mention of the Dalenpatius hoax. The *Histoire* (Vol. 1*,* 1766) of the Société Royale des Sciences at Montpellier contains nine contributions by Plantade as author or co-author.

[3] From 1699 on, the editor was Jacques Bernard. Given the friendship ("étroite liaison d'amitié") between Plantade and Bernard's predecessor Bayle, one wonders whether the editor was in on the prank.

[4] Leeuwenhoek's letter was published in Nov. 1677, *Phil. Trans. 142*, pp. 1040–46. The crystals are on p. 1044. Since Leeuwenhoek could not draw, the drawings he published were technically not really "his" but rather those of a draftsman made on his instructions. According to Cole (1930, 72) these crystals occur only in human semen.

published in the *Nouvelles*, it was reprinted (with pictures) almost immediately in the *History of the Works of the Learned 1* (London, May 1699, pp. 267–269).[5]

Leeuwenhoek, who learned of the report [apparently] by way the *Nouvelles,*[6] took the letter completely seriously and on June 9 sent a partial copy of it in Dutch translation to the Royal Society as part of a letter of his own criticizing it and denying its claims. This only caused de Plantade's report to become more widely known and taken more seriously than its author could have hoped in his wildest dreams – since it then also appeared in English translation (of the Dutch translation) in the *Philosophical Transactions of the Royal Society* (No. 255, Aug. 1699, 301–302) – along with the pictures of the spermatozoon and the two homunculi.[7]

Unfortunately for Leeuwenhoek, he was at this time also at work on an answer to a criticism of his own observations of "animalcula in semine masculine" made by a member of the Royal Society (Martin Lister); Leeuwenhoek sent off a letter defending himself on this question two weeks later (June 23). Both his critique of Dalenpatius and his defense against Lister were published in the *same* issue of the *Philosophical Transactions* (Aug. 1699). A plate containing pictures of the spermatozoon and the two homunculus forms (but not the crystals) taken from Dalenpatius (and labeled Fig. 2, 3, 4) was bound opposite the Table of Contents in front of the issue (this was the normal place for plates in the *Phil. Trans*.).[8] For whatever reason, however, Leeuwenhoek's *later* letter, which dealt with his *own* observations on spermatozoa, was placed as the *first* article of the issue, one page after the plates belonging to the *other* letter (the Dalenpatius critique), which was then printed some thirty pages later. To all appearances, the pictures are Leeuwenhoek's own and accompany his article on the animalcules in human semen.[9] The original Dalenpatius text itself makes no explicit mention of the attached figures except for a "Sequuntur schemata" at the end – which was left out of the translations anyway.

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[5] The running heads of this page in the London edition have the misprint 'April' instead of 'May'. This is not the only text that this issue of the *History* reprinted from the *Nouvelles,* and it seems that one main purpose of the journal was to reprint continental publications. The texts differ only slightly in capitalizations. The letter was left in Latin, "there being few of those, to whom it can be any way useful, but what understand Latin" (p. 267). Or as the *Nouvelles* (p. 552) put it "parce qu'elle contient un sujet qui ne peut être traité en Français." Cole (1930, 223) reports an Edinburgh edition of the *History* in which the letter appears on pp. 66-67, but I have not located it.

[6] Leeuwenhoek did not read Latin, and it is unclear whether he was sent a translation by someone or had one made after hearing about the article.

[7] The pictures of the crystals were not published in the *Phil. Trans.,* nor did they accompany the letter in Leeuwenhoek's later collections. Since Leeuwenhoek did not quote the part of the Dalenpatius letter on the phosphates, it is probable that this drawing was also not sent to the Royal Society.

[8] The digital version of the *Phil. Trans.* available in JSTOR is misleading since it places the pictures where they "should" have been, in front of the correct letter, not where they actually were, in front of the table of contents.

[9] The article "Part of a Letter from Mr. Leuvenhook [sic], dated Delft 23d. of June, 1699, concerning his Answers to Objections Made to his Opinions concerning the *Animalcula Semine Masculine,*" was without any figures of its own and contained expressions like "why might not we then assert, that in an Animal of the Masculine Seed of a Man, is locked up a whole Man, and that the Animals of the Seed, are all descending from the first Created Man" (p. 271, see also *Collected Letters* 12, 317).

Furthermore, due to the vicissitudes of printing and binding, these pictures were also placed wrongly in the seventh volume of the continuing Dutch edition of Leeuwenhoek's letters *Sevende Vervolg der Brieven* (1702); the plate was misplaced (opposite p. 74, instead of opposite p. 90 with the citation of Dalenpatius or opposite p. 94 with Leeuwenhoek's critique) so that it seems to illustrate a letter of Leeuwenhoek's to Nehemiah Grew (March 18, 1678), which he quoted extensively near the end of a later letter to Harmen van Zoelen (Dec. 17, 1698) dealing with his own observations on human semen.[10] Thus the three Dalenpatius pictures (labeled 2, 3, and 4) occur alongside a text referring both to "our male semen" and to Figures 2, 3, and 4, ("Fig. 2. 3. en 4. zyn van de selve Dierkens die doot leggen" (p. 74)).[11] This letter to Harmen van Zoelen (in the published version) contained no figures of its own – and the original figures from the quoted letter to Grew originally published in the *Philosophical Transactions* were not included in the later Dutch publication. Since the text makes reference to figures (though no others are included), it would have been logical for a reader to take the included figures as Leeuwenhoek's own.

Although one would think that Leeuwenhoek himself might have noticed the mistake after publication, nonetheless, seventeen years later in his Latin *Opera Omnia* (vol. III, *Epistolae ad Societatem Regiam Anglicam,* 1719), the most common later source on his work for those who knew no Dutch, this very same printer's mistake also occurs.[12] Thus, many of the victims of the hoax were fooled by the accidental attribution of the pictures to Leeuwenhoek – or to animalculist competitors like Johann Ham of Arnhem (1650–1723) and Nicolaas Hartsoeker (1656–1725) – whom Leeuwenhoek criticized in the texts opposite the misplaced pictures.

And in fact, even in the (Dutch-English) critical edition, *Collected Letters*, vol. 12 (1989), p. 293*,* there seems to be a translation mistake in the English version of the notes, saying the figures "ought to have been those that face pp. 74 [1702] and 68 [1719]" – which are exactly the pages they in fact face. The corresponding Dutch text (p. 292, which, according to my less than rudimentary Dutch, says just the opposite) is correct: They ought to have faced 92 [1702] and 86 [1719] respectively.[13]

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[10]The original the letter to Grew from March 18 1678 (published by the Royal Society in Latin translation in the *Phil. Trans*. (12 No. 142: p. 1044) designated the male seed involved as that of a *rabbit*, not a human! But the Dutch original and the later Latin translation of the text were clearer that human semen was involved; otherwise it fit fairly well – except that Leeuwenhoek's text asserted of all three pictures that they showed dead spermatozoa. Dalenpatius' pictures were supposed show live spermatozoa, though he does report that the little man he observed subsequently died. See also *Collected Letters*, vol. 12, p. 264/5.

[11] "Figs 2, 3, and 4 show the said Animalcules when dead." *Collected Letters 12*, p. 265. The fact that the text then immediately mentions a "Fig. 5" as well, might have been puzzling.

[12] *Epistolae* (1719) p. 68: "Fig. 2. 3. & 4. repraesentant ejusdem generis animalcula, at mortua." Theoretically, it is even possible that this second printer's error is independent of the first one, since the picture in the later Latin edition is placed opposite p. 68 instead of opposite p. 86. [The Google version of the BSB-copy misplaces the pictures at p. 58.] The Latin text at p. 86 retranslates the Dutch translation of the (Latin) Dalenpatius letter back into Latin.

[13] "Tegenover respectievelijk blz. 92 en blz. 86 hadden de figuren moeten staan, die te vinden zijn tegenover respectievelijk blz. 74 en blz. 68." Thus – unless I, too, have made a mistake in labeling some place – this is the first completely "correct" republication of the pictures and text since 1699.

Not till the middle of the eighteenth century was the hoax revealed, and it took some time before it was generally recognized. Jean Astruc (1684–1766), also from Montpellier and a regular contributor to the Academy of Sciences there, identified the real author behind the name "Dalenpatius" in 1740 in the second edition of his book on venereal disease, *De morbis venereis libri novem* (vol. 2, pp. 1002–3) asserting that Plantade, "as he was young, liked to joke" (*cum juvenis esset, jocari lubuit*). In volume 5 of his *Traité des maladies des femmes* (1765, p. 183), he reports that an unnamed "homme d'esprit de Montpellier" had told him personally that he did it "to amuse himself" (*pour se diverter*); (see also Cole 1930, p. 71, and Astruc, *Treatise On the Diseases of Women* (1767) vol. 3, pp. 104–5). Astruc (*Treatise*, 104/5) believed the hoax was harmless, and that, for instance, even though Antonio Vallisnieri (*Istoria della generazione,* 1721) had been completely taken in, "Happily, [the false observation] of Dalenpatius will not deceive any body, as the falsity of it is well known." Albrecht von Haller (1751) reproached Buffon for taking Dalenpatius as a serious representative of preformation and reports that he learned from Astruc that the publication was a complete hoax: "son experience n'est qu'un badinage tout pur."[14] Louis Dutens (1730–1812) in his *Inquiry into the Origin of the Discoveries* (1769, pp. 276/7 – French 1766) citing Astruc's report, asserted that Plantade claimed "that he himself had made a discovery of animalcula in the human seed, tho' afterwards he owned he had only given this out for his amusement." And the *Encyclopédie* article "Generation" by Arnulf d'Aumont, published in 1757 reported that Plantade had played the prank to amuse himself at the expense of the credulous.[15]

Despite these efforts at exposure, the hoax kept going for some time – and continues to this day. Philippe Guéneau de Montbeillard (1720–1785), a collaborator of Buffon's, edited and translated an "extract" of the Dalenpatius letter (without pictures) within the framework of a multi-volume collection of scientific papers of the past century, *Collection académique* (1766, p. 410). His comments indicate that he does not believe anything in the report, but he also gives no indication that it might be a hoax, nor does he mention Plantade as the real author. The English editor/translator of J.F. Blumenbach's *Institu-*

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[14] Haller, Review of Buffon's *Histoire naturelle* (1751, pp. 76–7): "C'est de Mr. *Astruc* que je tiens cette anecdote." Buffon had commented on Dalenpatius in his discussion of theories of generation in volume 2 of the *Histoire naturell* (1749) (ch. 5): "… il vit un de ces animaux se développer ou plutôt quitter son enveloppe; ce n'étoit plus un animal, c'étoit un corps humain, dont il distingua très-bien, dit-il, les deux jambes, les deux bras, la poitrine et la tête, à laquelle l'enveloppe servoit de capuchon (Voyez Nouvelles de la Répub. des Lettres, année 1699, pag. 552). Mais par les figures mêmes que cet auteur a données de ce prétendu embryon qu'il a vû sortir de son enveloppe, il est évident que le fait est faux ; il a cru voir ce qu'il dit, mais il s'est trompé,…" ("Dalenpatius saw one of these animals break through its coat or covering: It was then no more an animalcule, but a real human body, in which he easily distinguished the two arms and legs, the breast and the head. But it is apparent, from the very figures given by this author, of the embryo which he pretended to have seen escape from its covering, that the fact is absolutely false. He believed that he saw what he describes; but he was deceived…" (Buffon 1785, 131/132)).

[15] "L'auteur, qui étoit, sous le nom emprunté de Dalempacius, M. de Plantade, secrétaire de l'académie de Montpellier, a souvent avoüé que toute cette prétendue découverte est absolument supposée, & qu'il n'avoit eu, en la produisant, d'autre dessein que de s'amuser aux dépens des admirateurs, trop crédules, de ces sortes d'observations; en quoi il ne réussit que trop bien dans le tems ou il voulut ainsi en imposer au monde savant, de sorte qu'il ne contribua même pas peu à faire adopter au grand Boerhaave le système des animalcules, avec toutes ses dépendances." (d'Aumont 1757, 566/7)

tions of Physiology (1817) in his notes makes fun of Dalenpatius' observations, but never considers that they might have been a prank.[16] Emanuel Radl's once standard (though now dated) history of early modern biology (1905) cites Dalenpatius as the absurd high point of the theory of preformation.[17] And Elizabeth Gasking's *Investigation into Generation* (1967, p 54) reports on the Dalenpatius paper as a strange but serious position – but also mentions that it was considered by some to be a hoax.[18]

There are two main ways in which the hoax continues to have its effect:

1) Later readers and even some historians of science take the Dalenpatius letter as a normal document of preformation theory.
2) Since Plantade's pictures were so often associated with Leeuwenhoek, the hoax pictures pass as Leeuwenhoek's or else as those of some other preformationist author, such as Hartsoeker or Ham, who were criticized by Leeuwenhoek in the text accompanying the misplaced pictures.[19]

The Dalenpatius letter is now available

1) in the original Latin from the *Nouvelles* and the *History of the Works* (1699),
2) in an English translation of the partial Dutch translation in the *Phil. Trans*. (1699),
3) in a partial Dutch translation of the Latin in *Sevende Vervolg der Brieven* (1702), reprinted in the *Collected Letters* (1989),
4) in a Latin retranslation of the partial Dutch translation in the *Epistolae* (1719),
5) in a (partial) French translation of the Latin in the *Collection académique* (1766),
6) in a *complete* English translation of the Latin in F.J. Cole's *Early Theories* (1930),
7) in a new English translation of the partial Dutch translation in Leeuwenhoek's *Collected Letters* (1989).

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[16] John Elliotson in his notes to *Institutions of Physiology* (2nd ed. 1817 p. 290–1) with a vague reference to Haller, embellishes as follows: "and in the human semen, Dalenpatius actually saw one indignantly burst its wormy skin, and issue forth a perfectly formed human being. The little creatures would swim in shoals towards a given point, turn back, separate, meet again, move on singly, jump out, and dive in again, spin round, and perform various other feats, … Sure never was so much folly and bestiality before committed under the name of philosophy." See also 3rd ed. 1820, pp. 329–30.

[17] Radl *Geschichte der biologischen Theorien* (p. 104): "Die Krone hat der Theorie jedoch ein gewisser Dalenpatius aufgesetzt (1699), dem es gelungen sein soll, mit dem Mikroskop die Spermatierchen des Menschen in ihrer Entwicklung zu verfolgen, wobei er sah, wie sie, ursprünglich einer Kaulquappe ähnlich, später ihre Haut abzogen, und was darunter erschien, war nicht mehr ein Tier, sondern ein kleiner Mensch, an welchem Dalenpatius mit seinem Mikroskop zwei Hände, zwei Füße, die Brust und den Kopf gut unterscheiden konnte; an dem Kopfe sah er sogar eine Kappe, welche aus den Exuvien dieses Männleins gebildet wurde."

[18] See also Jean Finot *La philosophie de la longévité*, Paris: Alcan, 1906, p. 289

[19] For recent victims of this side of the hoax see the *Historisches Wörterbuch der Philosophie,* article "Präformation"; Ilse Jahn (ed.) *Geschichte der Biologie,* p. 213; and the false figures in the *Wikipedia* article on Hartsoeker (Dutch, English, German, Italian, Oct. 2020).

Royal Society translation (of the Dutch translation):

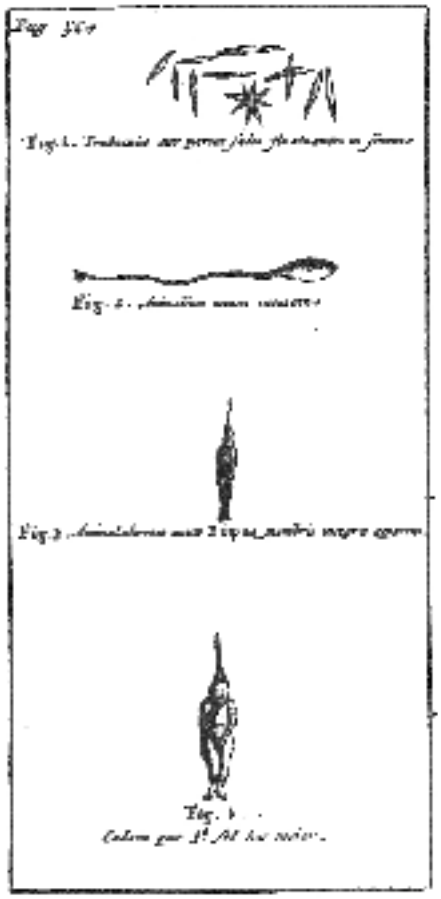
> Besides these, we discovered some small Animals of the same shape, as are in the *Pools* in the Month of *May,* etc. like the Spawn of Frogs that is in small Waters; and this Body doth hardly exceed the bigness of a small Corn-grain, the Tail being Four or Five times as big as the Body; these do move themselves with a strange quickness, etc. and make with the beating of their Tail, small bubbles, which they also did pull along.
>
> How should we have believed, that in them, a Human Body was lockt up, etc. Yet notwithstanding we have seen it with our own Eyes: For when we did Contemplate every thing with great Curiosity, one did appear that was somewhat bigger, etc. that had pull'd of[f] the skin, wherein it was locked up.
>
> This showed clearly the two naked Thighs, the Legs, the Breast, etc. Both the Arms, etc. the skin being pulled up somewhat higher, did cover the Head like a Cap.
>
> We could not discern the difference of Sex, etc. and at the same time it pulled of[f] it's skin it died. This changing [*metamorphosis*], although hitherto never heard of, must seem to no Body strange, or wonderful; because many other Animals change their shapes daily, whereof possibly the opinion of the Transmigration of Souls, hath drawn its Original. … (*Phil. Trans*. 21, pp. 301–2)

Francis J. Cole's Translation

> Extract of a letter from M. Dalenpatius to the promoter (*Auteur*) of these Nouvelles, containing a curious discovery made by means of the microscope.
>
> If philosophers in their attempts to discover the causes of natural phenomena would make diligent inquiry of Mother Nature herself, they could not possibly give birth to such monstrous fictions as they daily produce. Personally I have ever held this opinion, and have made it a principle to utilize every means at my disposal, so that if any way of approach to Nature should open, I might examine it with great care, and strive by all means in my power to reach her innermost secrets. At last one such way, and that a most certain one, has happily brought success beyond my hopes. With my microscope – than which I believe (if I may say it without boastfulness) hardly any better could be made, since the lens is little bigger than a dot which can only just be seen[2] – I was diligently examining the constituents of human semen, and first of all (mark you) I observed a certain aqueous substance, whose parts could in no way be discriminated. Floating in this liquid were a number of small rigid staves of different sizes, but for the most part about a third of a line thick and two lines long, and pointed at both ends. These little spars [*antennulas*], as they might be called, either drift about alone or attach themselves to one another, and so entangled and interlaced they rather remind one of a sea urchin, or those caltrops which are thrown down before an attacking force to stop the advance of cavalry. When a number of them have collected together, and lack moisture, they cohere to form clumps, which those who first examined semen, using inadequate micro-

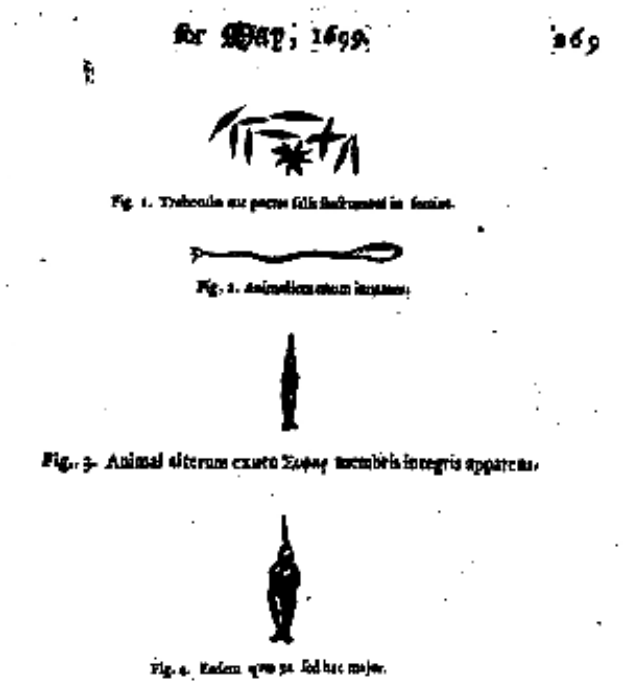
scopes, have declared to be a kind of hair. I am of the opinion that these bodies are really particles of salt, and I am firmly convinced that the pleasurable excitation at the time of coition arises from their friction. In addition I detected certain animalcules, of almost the same shape as the young of frogs which are seen in the month of May in streams and muddy swamps. Their bodies scarcely exceed in size a grain of corn, though some are rather larger, whilst their tails are four or five times the length of their bodies. They move with extraordinary agility, and by the lashings of their tails they produce and agitate the wavelets in which they swim. Who would have believed that in them was a human body? But I have seen this thing with my own eyes. For while I was examining them all with care one appeared which was larger than the others, and sloughed off the skin [σῦφαρ] in which it had been enclosed, and clearly revealed, free from covering, both its shins, its legs, its breast, and two arms, whilst the cast skin, when pulled further up, enveloped the head after the manner of a cowl. It was impossible to distinguish sexual characters on account of its small size, and it died in the act of uncovering itself. This metamorphosis, though unheard of before, should nevertheless not seem strange, seeing that many other animalcules daily put on new forms. Perhaps indeed it was this fact which gave rise long ago to the idea of metempsychosis. I next observed the constituents of the blood, which I found to be solid translucent spherical bodies half a line in diameter, floating in the same medium as that of the semen – which medium perhaps acts as a vehicle for all the humours of the body. These particles settle and coagulate when the serum evaporates. I shall publish shortly a dissertation, perhaps neither useless nor uninteresting, intermingled with various observations, on the particles which generate the venereal disease, arthritis, and other disorders, subjects not hitherto treated except by conjecture; and therewith many other things concerning the circulation and nourishment of the sap in plants. Meanwhile I wished to publish these things that the learned might make known what they think about this matter. Diagrams are attached. (Cole, *Early Theories* (1930) pp. 68–70)

2 This refers to the fact, well known at the time, that the smallest biconvex lenses had the highest magnifying power. [Cole's footnote]

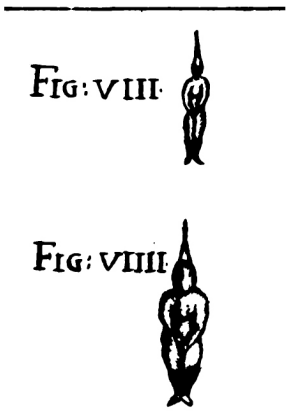


Nouvelles 1699 p. 555

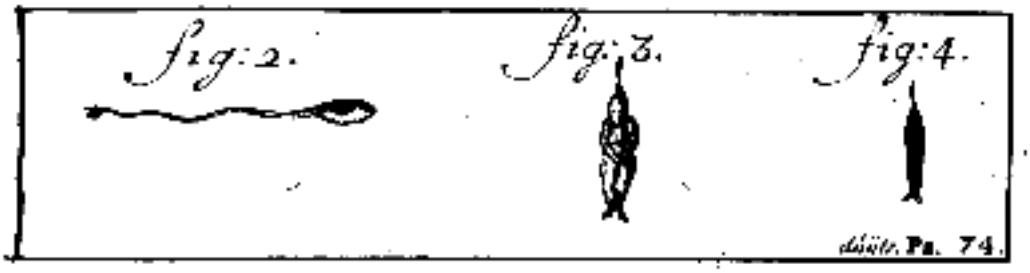
Phil Trans. 1699, opposite p. 267



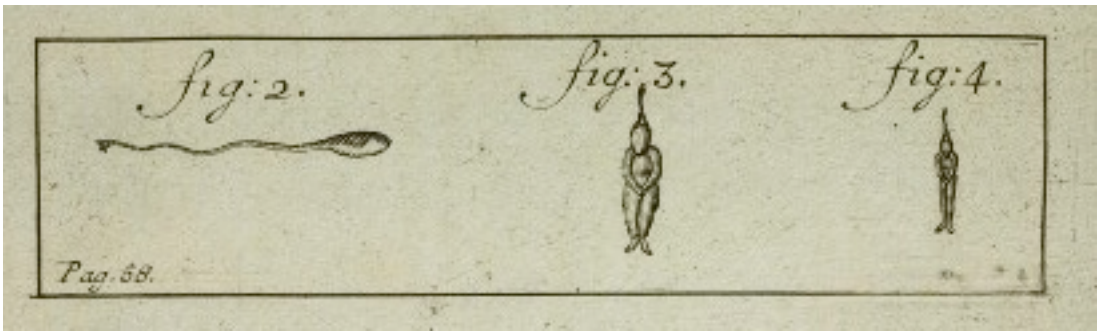
History of the Works of the Learned 1, 1699, p. 269



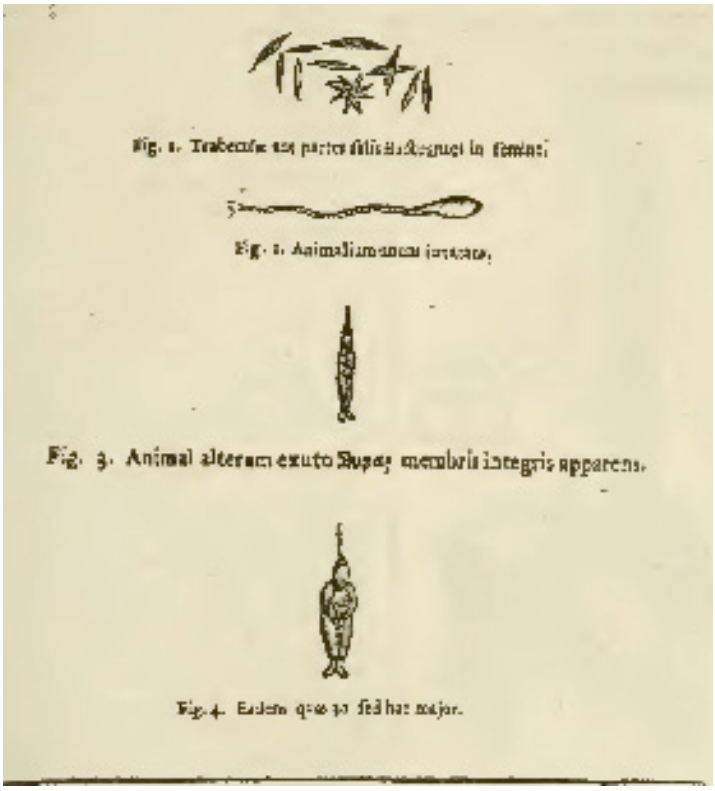
Vallisnieri, *Istoria* (1721) p. 11



Sevende Vervolg der Brieven (1702), opposite p. 74.



Epistolae ad Societatem Regiam (1719), opposite p. 68 (in the Google digitized version (BSB Munich): wrongly read as ‘58’ and placed at p. 58)



History of the Works (2nd ed. 1701, p. 269)

Leeuwenhoek’s phosphates
Phil. Trans. 1677/8, p. 1042

NOUVELLES DE LA REPUBLIQUE DES LETTRES.

Mois de Mai 1699.

Par JAQUES BERNARD.

A AMSTERDAM,
Chez HENRY DESBORDES, dans le Kalver-straat.

M. DC. XCIX.
Avec Privilege des Etats de Holl. & Westfr.

ARTICLE V.

Extrait d'une Lettre de M. DALENPATIUS *à l'Auteur de ces Nouvelles, contenant une découverte curieuse, faite par le moyen du Microscope.*

(a) *Si Philosophi, dum rerum naturalium causas aperire conantur, ipsam matrem naturam sedulò consulerent, haud quaquam tam prodigiosos quotidie figmentorum suorum ederent partus. Nobis autem, quibus hæc ratio potior semper fuit, nihil intentatum relinquendum putavimus, ut, si quis ad eam pateret, aditum sollicitè circumspiceremus, & omnibus modis ipsius adire penetralia admiteremur. Tandem unus, & hic certissimus, præter spem, feliciter successit. Microscopio etenim, quo vix ullum (absit à verbo jactantia) præstantius confici posse crediderim; cùm vix punctum visibile superet; dum, inquam, humani seminis partes attentè contemplamur, primum ecce tibi sese nobis obtulit aquea quæ-*

(a) On laisse cette Lettre dans la langue qu'elle a été écrite, parce qu'elle contient un sujet qui ne peut être traité en François.

quædam ſubſtantia, cujus partes nullo modo diſtingui poterant: tum in ea fluctuantes rigidæ trabeculæ omnes magnitudine impares, ſed quarum maxima pars trientem lineæ craſſæ, ad binas lineas longæ, & ad utramque partem acuminatæ fuere; antennulas diceres, volvuntur aut ſolæ, aut aliæ alias ſubeunt, ſicque implexæ & intricatæ Echinum non malè referunt, aut pedicas, quæ in aſſultibus objiciuntur, equitatui ne quâ iter ſit. Ubi in numerum cóiere, & humor eas defecit, cohærentes fecere grumos, quos, qui primi ſemen examinarunt, inſufficientibus uſi Microſcopiis, idem, veluti capillitio quodam compoſitum, auſi ſunt affirmare. Illas, ſalium partes eſſe autumem, earúmque volutatione voluptatem & titillationem illas coſtus tempore ſenſibiles oriri, mihi penitus perſuaſum eſt. Inſuper animalcula quædam deteximus, eadem ferè formâ, quâ, menſe Maio, in rivulis, limoſiſque paludibus ranarum fœtus videntur. Horum corpus vix granum frumenti ſuperat, quædam grandiuscula; acicula autem quater aut quinies corpus adæquat; mira agilitate ſeſe agitant, undaque verberibus, undulas, quibus innatant, cient, pulſ utque. Corpus humanum in iſtis quis crediderit? Attamen illud ipſiſmet noſtris vidimus oculis. Nam dum omnia, cu-

 rioſè

riosè lustramus, unum grandius exuto jam σύφαρ, quo involvebatur, sese aperuit, nudatasque clarè ostendit ambas tibias, crura, pectus, gemina brachia, & exuvium altius protractum caput ad instar cuculle obnubebat. Sexuum discrimina, præ exiguitate, nosci non quita sunt; & moritur, dum se se exuit. Hæc metamorphosis, quanquam huc usque inaudita est, attamen mira videri non debet, cùm multa alia animalcula, se in novas quotidie formas induant; unde & fortassis nata est jampridem Metempsychoseos opinio. Observabamus deinde partes sanguinis, quas solidas, translucentes, globosasque semissis lineæ diametro invenimus; eidem materiæ innatantes cui semen; quæ fortè omnibus corporis humoribus vehiculi loco est. Hæ autem partes sidunt & coagulantur, ubi serum illud evaporat. Dabimus propediem Dissertationem forsitan non inutilem & injucundam, variis intertextam Observationibus, circa partes quæ luem veneream, Arthritim, aliosque morbos generant, quæ nemo hactenus nisi conjecturis fecerit. Item multa alia de circulatione & nutritu succi Plantarum. Interim hæc vulgari voluimus, ut Eruditi, quid hac in re sentiant edere velint. Sequuntur Schemata.

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