



## The Natural History of The Silkwormes and their Flies

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## **“The Natural History of *The Silkwormes, and their Flies*”**

The titlepage of the entomological encyclopedia *Insectorum sive Minimorum Animalum Theatrum* (see figure one) is clear about Thomas Moffet’s role in its composition. Named above him are the European naturalists whose research provides the basis for the study, namely Conrad Gesner, Edward Wotton and Thomas Penny, whose notes Moffet inherited. Moffet is credited with having gathered, supplemented and completed the volume (“maximis concinnatum, auctum, perfectum”). *Insectorum* is not just based on the fieldnotes of these pioneering naturalists, however: it is enriched by Moffet’s eclectic and extensive reading. The prefatory material includes a catalogue of the almost four hundred writers who are cited in the text: within the ‘A’s, for example, are Aesop, Albertus Magnus, Aristophanes, Aristotle and Averroës.<sup>1</sup> *Insectorum* can be characterised as a concatenation of disparate sources from various genres. It could already be countered that it is misleading to claim that Moffet “composed” the work, as the term implies more artistic intent than the work possesses. The multisource imitation in which Moffet engages might make it less controversial to diminish his role to that of an artisan “compositor”, with a tighter etymological sense of placing elements together. It would be less presumptive still to follow the Latin of *Insectorum* and create a term like “concinnator”, “perfector” or, for that matter, “auctor/author”. This authorial dilemma indicates the need for a contextualised account of Moffet’s creative role, and the underlying principles informing his approach in *Insectorum* are relevant to a consideration of Moffet’s literary work too. Moffet’s style was then standard among early modern naturalists: Ann Blair has likened Jean Bodin’s *Universae naturae theatrum* (1596) to a commonplace book, and William Ashworth, with particular reference to Gesner, has described this sharing of authority between textual and experiential evidence an “emblematic world-view”, which holds

the belief that every kind of living thing in the cosmos has myriad hidden meanings and that knowledge consists of an attempt to comprehend as many of these meanings as possible.<sup>2</sup>

The exposition of “myriad hidden meanings” is basic to Moffet’s method. This epistemic model frustrated a twentieth-century historian of science, Charles Raven, who disparaged *Insectorum* as “the work of a humanist of the Renaissance, not of a naturalist and observer, a monument to the past rather than a searchlight into the future”.<sup>3</sup> Raven implicitly presumes the superiority of a conventional (as opposed to natural) scientific discourse, of the sort that Francis Bacon was to advocate not long after Moffet’s death in 1604. By contrast, Moffet retrieves information from a dense network of allusion and reference, whereby things remain attached to the words describing them.<sup>4</sup> Moffet’s act of composition assimilates these multitudinous authorities within his work.



Figure 1. Thomas Moffet, *Insectorum Sive Minimorum Animalium Theatrum* (London, 1634), titlepage.

In addition to his interests in natural philosophy, Moffet was a professional physician.<sup>5</sup> He was employed by the Sidney family at Wilton from 1592, and remained attached to the residence until his death. Moffet wrote a two-book verse encomium *The Silkwormes, and their Flies*, and it was natural for him to dedicate this to Mary Herbert. The work displays an intimate knowledge of life at Wilton, though almost all direct references are only found either at beginning or end of each book.<sup>6</sup> The subject-matter was certainly topical for his audience, even before James I had embraced sericulture as an economic cause (Moffet's own interest in silkworms goes back as far as his trip to Italy in 1580). It is this study's contention, however, that Moffet's courtly connections are of subsidiary interest: *The Silkwormes*'s compositional style befits that of a humanist natural historian.<sup>7</sup> It was written close to its publication date of 1599, and so can be placed within ten years of *Insectorum*, which exists in a manuscript copy dated 3<sup>rd</sup> March 1589 (though it was not published until 1634).<sup>8</sup> Certainly *The Silkwormes* is no more a "searchlight into the future" than *Insectorum* is. Like *Insectorum* Moffet's depiction of the silkworm is illuminated by reference to divergent historical sources, which act like a prismatic lens trained on its subject. Moffet's major sources in the poem are all found in *Insectorum*'s catalogue, among them Pliny, Ovid, Plutarch, and Virgil. Though *The Silkwormes* is known as the first Virgilian georgic in English, Moffet's work is not coldly derivative. Moffet does not obediently follow classical precedent in order to maximise the textual legacy that Virgil (or any other individual author) conferred on his text: though such imitation could certainly create great successful poetry, Moffet does not instigate a process of dialogic cultural transmission in *The Silkwormes*. The titlepage (see figure two) may declare its georgic inheritance with the self-description "a Countrie Farmar, and an apprentice in Physicke" and the claim to be written "For the great benefit and enriching of England", but close examination of *The Silkwormes* reveals that Virgilian tradition is seldom recalled, and certainly in no consistent manner: indeed, the only

other incontrovertible reference is a marginal note indicating an “exhortation to all Farmers and Husbandmen to plant Mulberries” (67.10n). The poem also offers practical advice on the keeping of silkworms in Elizabethan Britain, but this should not cloud its qualities as a literary text either. As we shall see, Moffet’s imitation is precise, subtle and multifaceted. It shares much in common with the accumulative methodology familiar from his work as naturalist.

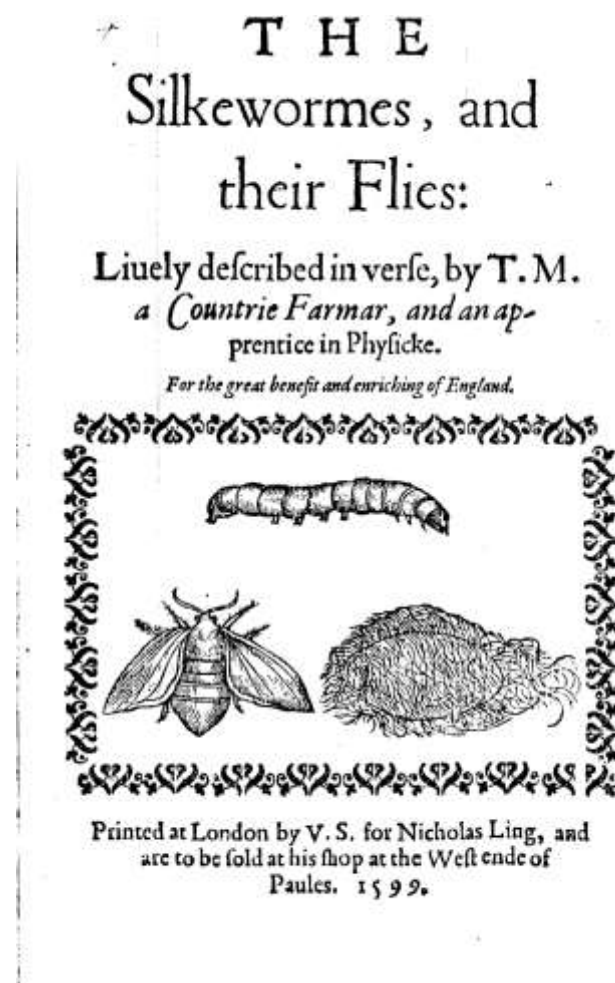


Figure 2. Thomas Moffet, *The Silkwormes, and their Flies* (London, 1599), titlepage.

The titlepage of *The Silkwormes* is noteworthy for its woodcuts, which resemble those in *Insectorum* (and presumably also the watercolour illustrations of the manuscript version). They are emblematic of the naturalist purview of *The Silkwormes*, for they indicate

that the poem is not a vehicle for self-aggrandising imitation that seeks to claim an identity through acquisition of a classically-inflected voice. The titlepage encourages us to approach *The Silkwormes, and their Flies* as a study of silkworms and silkflies. With this aim in mind one might expect Moffet to rely heavily on Pliny's *Natural History*, which had been edited repeatedly to restore its textual integrity, and Moffet does indeed cite Pliny numerous times.<sup>9</sup> But Pliny's precedent does not unbalance the poem any more than Virgil's does. There is no evidence that Moffet is inspired by a belief that linguistic exactitude in imitation is the determining factor in his style. Moffet's speaking persona is too inconspicuous, and the first person is mostly reserved for references to Herbert or assertions of fact: for example, 21.11, 25.22 and 33.9-16. Virgil and Pliny are two authorities within a constellatory configuration of writers to which Moffet's panoptical imitation aspires. Moffet's technique does not fall within those categories of imitation that emphasise the author's struggle to emulate, assimilate or internalise a given source.<sup>10</sup> Moffet attempts to provide an objective account of the silkworm that is more authoritative than his personal account could ever be, regardless of whose voice he inherited. His style and method are undoubtedly indebted to humanist pedagogy, but this is less to galvanise his rhetoric than to extend his range of reference.

Marco Girolamo Vida's *De Bombyce* (1524) is another definite precursor to Moffet's work. Both offer guidance on how to hatch, feed, clean, house and rest silkworms. But though Moffet's poem includes such factual nuggets as the amount of light silkworms should receive ("two windows are inough, superfluous three" (37.19)), the didactic strain of his work does not make the work a rehearsal of the more didactic *De Bombyce*. The possible usefulness of *The Silkwormes* is mitigated by the fact that, although it is conceivable that Herbert practised sericulture herself, silk production is not mentioned in the Wilton accounts.<sup>11</sup> As such, neither *The Silkwormes*'s practical utility nor Vida's influence should be exaggerated: indeed, Moffet twice distances himself from Vida's postulation of the

silkworm's mythical origins by referring to his "fictions strange" (5.2) and "what ere th'Italian Bishop dar'd | To faine for true" (8.12-3). Moffet bridges the dichotomy drawn by *De Bombyce*'s English translator, Samuel Pullein, that

Virgil's poem appears, like an object through a multiplying glass, in a variety of situations and dazzling colours; but Vida's gives us a microscopic view, which more justly represents nature, and only magnifies in order to discover truth.<sup>12</sup>

*The Silkwormes* accommodates both the didactic particularity of Vida's poem and the more wide-ranging epideictic strain of Virgil. The poem is neither a manual for the keeping of silkworms, nor a manifesto for a "fairly specific economic program".<sup>13</sup> Moffet's imitation is not instrumental to a socio-political discourse: it provides the substance for a celebration of sericulture based on humanist natural history.

Imitation is the means by which Moffet draws on a great range of sources, at once multiple and closely realised. It is a form of quotation that allows him to borrow ideas without inflecting his poetic style. Moffet's marginal notes are like footnotes that corroborate his argument and provide assistance to the reader. They stress the work's self-conscious participation in a community of learning. Moffet regularly makes direct reference to his sources: for example, "some other (I) Authors" with a sidenote "I *Natal.Com.lib.vlr.Mytho*" (18.1) that refers to Natalis Comes' *Mythologies*; or simply "Read Plutarch" (54.11n).<sup>14</sup> In the rare case that Moffet imports a phrase from Homer—"Rose fingred I Dame" (11.9)—that too is interrupted by a point of reference. Marginalia also indicate the common linguistic ground on which the poem is based. The note "I Pyramus signifieth as much as fiery" alongside the line "(One too too hot, for I so imports his name)" (17.19-21)—dismissed as an "absurdity" by Kenneth Muir—highlights Pyramus's impetuosity in order to draw a lexical connection between subject-matter and words being used to describe it.<sup>15</sup> Likewise when Moffet makes reference to the two meanings of  $\Psi\upsilon\chi\acute{\eta}$  (40.9n), soul and butterfly, he proves that his vernacular coheres with Greek.<sup>16</sup> This attention to detail has its parallel in *Insectorum*, where

Moffet will give, for example, fourteen names for the caterpillar in various European languages: Ghazam, Rugaverme, Brucho, Chemille, Chattepeleuse, Caterpillars, Oubuts, Palmerwormes, Rup Hausenka, ein Raup, Ruype, Gasienica, Certris and Cedebroa.<sup>17</sup>

*Insectorum* is founded upon diversified forms of evidence; principally, observation, anecdote, language and myth. *The Silkwormes* integrates these diffuse interpretative matrices into a single composition.

The method of imitation described relies on the existence of natural language, such that things are inseparable from how they are named. It entails an ontological interest in the emergence and dispersion of creatures into cultural forms. James B. Bono has generalised that in the sixteenth century “the text of nature was profoundly intertextual in its nature”.<sup>18</sup> “Intertextual” is a helpful term here if it provokes awareness of how early modern naturalists constituted knowledge of things—and books—from a network of cultural references. It provides a clear distinction from “textual” imitation, characterised as a closed exchange between Classical and Renaissance author; for example, Virgil and the Virgilian writer. This necessitates the description of a distinct imitative practice, one which is both variegated and targeted. The term “intertextual” ought not, however, lead to a demarcation of written sources from observation and common knowledge, for all three were essentially united. Moffet’s marginal notes are, in a sense, more democratic by drawing out all manner of reference, from Phoebus meaning “the Sunne” (11.11n) to citations like “Anacreon in one of his latter Odes” (36.21n). They do not, as has been suggested, indicate the existence of “two audiences”, but provide a sense of the range of material contained in the work.<sup>19</sup> His marginalia indicate an imitative practice seeking to access a nebulous but epistemologically valuable range of past authorities.

Moffet’s citatory imitation does not create a clinical poetic language that gestures to a nascent scientific discourse. Nor does the isolation of discrete passages quoted imply that



Moffet hopes to transcend the fundamentally textual grounds of early modern natural philosophy. These would be anachronistic deductions. This is not to suggest either that *The Silkwormes* should be defended for its purely “literary” status, for the terms “science” and “literature” do no more to describe the distinctions between Moffet’s concerns in *Insectorum* and *The Silkwormes* than would the verbs “composit” and “compose”. The two works are distinct because they were written for separate audiences. It would be better to explore the differences in method indicated by one being written in Latin prose and the other in vernacular verse, and by the selection of sources appropriate to each enterprise. However, a basic methodological similarity remains that places a premium on Moffet’s imaginative synthesis of his material. *The Silkwormes* is worthy of serious attention from literary critics for the coherence of its polyphonic imitation into a unified work, one that also seeks to be pleasant to read. Its composure in composition should be recognised.

Moffet is a collagist who arranges his imitated material such that the whole takes strength from its parts. *The Silkwormes* is a coalescence of references and similarities wrought from a “synthetic” rather than “analytical” method.<sup>20</sup> Moffet is assisted in the attempt by adopting a lighthearted tone of voice appropriate to his audience that moderates the work’s ambition, and prevents the work overreaching itself. The use of humour to introduce necessary humility was consistent with widely-held assumptions about natural history: as Paula Findlen has observed, it was usual for “scientific” texts of the period to affect a jesting style, for Nature was characterised as sophisticated, deceptive and fecund.<sup>21</sup> Rather than recite grave truths about Nature’s workings, “scientific” writing tended to stress its gentle and cherishable diversity. *The Silkwormes* is unified through its consistently pleasant tone of voice: indeed, Michel Riffaterre has noted the specific poetic capacity of humour to unify otherwise disparate sources, writing that “intertextual incompatibilities [...] create the humor that gives the text its shape and the adequate form and context that make for

the organic unity one expects of a poem”.<sup>22</sup> The encomium, playful but not parodic here, is well suited for Moffet’s exploration of the silkworm’s cultural history.

The implications of these ideas for Moffet’s poetry are seen nowhere better than the Pyramus and Thisbe episode. The relevance to Moffet’s theme—that the blood of Pyramus and Thisbe permanently stained the Mulberry tree—is chiefly made in just two stanzas (15.1-8 and 17.17-24). But the detailed retelling that unfolds over twenty-six stanzas towards the beginning of book one (9.9-17.24) is pertinent to Moffet’s wider concerns. Moffet is well aware that the tale is “most sweete” (9.9), and does not presuppose its veracity. He is untroubled by its failure to produce a credible origin for the colour of the Mulberry tree’s fruits. The tale retains a literal relevance to Moffet’s theme regardless because it contributes towards an intertextual array of material being amassed. The passage is not derisive or “burlesque”, but is woven naturally into a survey of the silkworm.<sup>23</sup> Moffet’s doubts about its truth status are clear from the table of contents, which describes this section as “Diuers opinions how and when silke was first inuented and worne” (A3<sup>v</sup>). As this heading suggests, the episode intended to add variety without being taken as an authoritative origin myth.

The transitional stanza at the end of this section develops Moffet’s position with regard to his sources:

These be the tales that Poetizers sing,  
Of silken-worme, and of their seed and meate:  
Sweete, I confesse, and drawn from I Helique spring, *1 Wherof only the muses drank, as Poets imagine.*  
Full of delighting change, and learning greate,  
Yet, yet my Muse dreams of another thing,  
And listeth not of fictions to entreate.  
Saye then (my Ioye) say then, and shortly reede,  
when silk was made, & how these silkworms breed. (20.9-16)

The phrase “Full of delighting change, and learning greate” (20.11-12) could be taken as a description of the whole poem. When Moffet asks his Muse to transcend “fictions” and begin establishing facts about the silkworm, his muse does not “dream” of reverting to the didactic style of Vida. The more authoritative source Moffet has in mind is Scripture, and particularly Genesis. The subsequent four stanzas contain marginal notes to Matthew’s Gospel (21.4n), the Book of Genesis (21.22n), Melchisedech (20.18n), and Moses (21.18n), with other unannotated references in the text. For Moffet the only escape from intertextual description of metamorphic and unstable natural forms is Scripture.<sup>24</sup> His intertextual “fictions” stand in relation to a singularity of meaning that lies in the past, not the future. Moffet’s interest in non-fiction here does not make him progressive, but adds urgency to the recollection of past authorities.

That truth is located at the point of Creation for Moffet is evident from his preoccupation with origins. The first five entries in the table of contents, which cover most of the first book, each contain the word “first”: for example, “Whether silke-worme or the Silke Flie were first created”, and “What day of the weeke they were first created” (A3<sup>v</sup>-A4<sup>r</sup>). Moffet’s marginalia refer to Genesis seven times in total, and it is invoked most strongly at the outset of the poem, where Moffet appeals for the restoration of Eden: “A time there was (sweete heau’ns restore that time,)” (1.17). He makes the crucial insight that his discussion of silkworms is itself affected by the legacy of original sin. Sericulture is Moffet’s chosen subject in part because of contemporary demand for silk clothing, but he is quick to point out that there was no obvious use for silk before the Fall: “Did it [the innocent mind] for silken wastcotes then intreate? | [...] No, no there was no neede of such a feate” (2.11-12). The first reference to Pliny (3.13n) follows from his attempt to trace the development of human garments. Imitation here is symptomatic of original sin, in that it causes the poet to cast backwards and retrieve lost understanding. For example, Moffet states more than once, with

reference to Exodus (4.8n), that originally senior priests alone would have worn fine silk garments. This point is also made in *Insectorum*: “toties immortalium talium profusionem et luxum damnarum, qui vestimenta Serica & holoserica (regum olim insigna) coeno polluunt” (“the excessive profusion and luxuriousness of men in such costly things who defile with dirt, silk and Velvets, that were formerly the monuments of Kings”).<sup>25</sup> This criticism is an incidental remark arising from Moffet’s search for answers through reference to Mosaical law. *The Silkwormes* is likewise concerned with more profound and universal themes that make its objections to luxury at most casual.<sup>26</sup> When Moffet makes such references in his poem, these might well gesture to his female audience, but they are included on the basis of the poem’s broader interests in explaining the origins of sericulture. The mosaical and Mosaical features of the text make the poem more literal-minded and expansive than a poetic social commentary would ever be.

The assumptions grounding Moffet’s imitation only fall into place once another Christian-influenced conception, that of the microcosm and macrocosm, is taken into account. Moffet’s description matters because it possesses meaning far beyond itself: “So both in Art and Nature tis most cleere, | That greatest worths in smallest things appeare” (34.23-4; see also 34.1-37.24, 47.17-24 and preface). The unswerving literalism of Moffet’s work places gentle but definite weight on its sincerity. His method here shares much with another work that Moffet imitates, namely Guillaume de Saluste Du Bartas’s *La Sepmaine* (1578). Moffet bases a whole stanza (“Th’ Arch-mason of this round and glorious bal” (49.1)) on Du Bartas’s description of God’s informing power over nature.<sup>27</sup> *La Sepmaine* is the archetypal encyclopedic narrative, which endeavoured to bring Creation onto the page in all its cosmic glory. Understanding nature as a manifestation of God validates a process of recording details to express divine abundance. Moffet might concentrate on one creature only, but his text is motivated by a similar desire to convey the splendour of nature through stylistic fecundity.

Like Du Bartas, his art is essentially maximalist, and his authorial effort is focused on the act of creation. This creation is a flawed metonym for Creation, flawed because original sin distorts the writer's spotlight on Eden. The imperfections inherent in any replication of that original order make each work a unique composition.

The relation between originality and imitation in *The Silkwormes* becomes more obvious in its concluding section. In a remarkable passage Moffet describes the dissection of a silkworm egg:

Eye but their egges, (as Grecians terme them well)  
And with a penne-knife keene diuide them quite,  
Behold their white, their yolke, their skin, and shel,  
Distinct in colour, substance, forme, and sight:  
And if thy bodies watchmen do not swell,  
And cause thee both to leape and laugh outright,  
    Thinke God and nature hath that eye denied,  
    By which thou shouldst from brutish beasts be tried. (72.9-16)

Though Moffet appears to lay aside his pen for a penknife (used for sharpening quill pens), this gesture does not represent a stage in a man's epistemological evolution from caveman to white-coated scientist via Renaissance humanist, quill in hand. There is no suggestion of teleological development here, which is made clear in advance by the marginal note "How great pleasure there is in keeping them [silkworms], both to the eies, eares, nose, and hands" (71.23n). The incision reveals a miniature universe of detail, with the asyndetic third line in particular making its microcosmic relevance apparent: an earlier passage has already specified how an egg is a type for the universe (47.1-8 and n). This precise correspondence aside, it is expedient for Moffet to finish writing with albumen on his hands. It allows him to make reference to the particular circumstances that predicated the poem, namely his situation at Wilton. The stanza quoted is already in the imperative, and the concluding stanzas become

an increasingly direct address to Herbert. The final stanza could hardly be more intimate, for it contains the image of Herbert cultivating silkworms within her bosom: “Yea Queen of Queenes, for vertue, witte, and might, | Perhaps wil hatch them twixt those hillocks rare” (75.19-20). The miasma of detail offered in these concluding stanzas does not solve the mysteries of the silkworm’s Edenic origins, which remain visible only through a glass darkly. The conclusion and other references to Wilton in the poem insist on Moffet’s originality, as the means by which he makes his work appropriate to the occasion and audience for whom he writes. This does not mean that his poem becomes a proclamation on contemporary society, but that his imitated material is being consciously drawn together on the page in a self-conscious manner that is more likely to be pleasing for its audience.

Moffet’s shift from imitation towards original observation does not cancel out the “most sweete” examples with which the poem began. These individual details taken from experience only make the poem specific to the circumstances of its own genesis, and have little epistemological value. This method is also found in *Insectorum*. In the preface to the second book, which precedes his chapter on silkworms, Moffet mentions

quot me aculeis Minorum gentium Insecta impetiverint, quam aegre cerebrum, dextram, oculos (dum singula accuratius secarem perpenderemque membra) affecerint.

(with how many stings the insects of the lower ranks have assaulted me, how much they have troubled my brain, my right hand, my eyes, whilst I accurately dissected and observed all their parts.)<sup>28</sup>

If Moffet were using his rashes here to claim that the work’s research is original to him, then *Insectorum* could be accused justly of plagiarism. Moffet has already responded to this charge in the initial preface, where he circumscribes his creative role by acknowledging his predecessors. Even here the phrase “historiam texui” is mischievously translated by J. Rowland as “I forged the history” in the 1658 translation.<sup>29</sup> This returns us to *Insectorum*’s titlepage, which is unequivocal about Moffet’s authorship—though the 1658 titlepage only names “Tho. Mouffet” as author.<sup>30</sup> Moffet’s work might not claim originality in content, but

his imitation requires a complex synthesis of sources and an individual mind to coordinate its many details into a single work. Moffet's 'forgery' is not the passing-off of someone else's work as his own, but the creation of a tightly-knit text that is crafted for a specific situation and readership. The author's experience is recalled not as anecdotal evidence, but to emphasise that both works have been arranged by an individual.

Moffet's moments of originality and his authorial efforts are invested in fitting his material to the occasions that inspired them. This modest aim defers to the act of original authorship that occurred at Eden, which can only be accessed by intertextual means. Imitation is valuable because the accumulated textual legacy inherited by Moffet is his most direct means to describe the silkworm and its origins. Moments of literary originality in *The Silkwormes*, then, have no truth-content but emphasise the specificity of the individual writer and his readers.<sup>31</sup> Moffet's temporal location matters all the more because his episteme is based upon his distance from the original act of Creation. Accordingly his compositional model should be judged for how it leads *Insectorum* to feel comprehensive, and *The Silkwormes* amenable to its audience. Future studies of *The Silkwormes* would do well to examine more closely the merits of Moffet's poetics. Contextualised readings of the poem need to attend to how Moffet's situation affects the form of *The Silkwormes*, as well as its content. The crucial affinity with Du Bartas, whose influence stretches far into the seventeenth-century, indicates the far wider relevance of understanding how Moffet constructs his kaleidoscopic image of *The Silkwormes, and their Flies*.

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<sup>1</sup> [Note: I gratefully acknowledge that this research was supported by the Arts and Humanities Research Council] Thomas Moffet, *Insectorum Sive Minimorum Animalium Theatrum* (London, 1634), A3<sup>r</sup>-4<sup>v</sup>.

<sup>2</sup> William B. Ashworth Jr., "Natural History and the Emblematic World View", in *Reappraisals of the Scientific Revolution*, ed. by David C. Lindley and S. Robert Westman (Cambridge: Cambridge University Press, 1990), 306-33 (312); Ann Blair, *The Theater of Nature: Jean Bodin and Renaissance Science* (Princeton, N.J.; Chichester: Princeton University Press, 1997). See also Allen G. Debus, *Man and Nature in the Renaissance* (Cambridge: Cambridge University Press, 1978) and Brian Vickers, *Occult and Scientific Mentalities in the Renaissance* (Cambridge: Cambridge University Press, 1984), 95-163.

<sup>3</sup> Charles E. Raven, *English Naturalists from Neckam to Ray: A Study of the Making of the Modern World* (Cambridge: Cambridge University Press, 1947), 190.

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<sup>4</sup> Martin Elsky, “Bacon’s Hieroglyphs and the Separation of Words and Things”, *Philological Quarterly*, 63 (1984), 449-60. See also James J. Bono, *The Word of God and the Languages of Man: Interpreting Nature in Early Modern Science and Medicine. Vol.1, Ficino to Descartes, Science and Literature* (Madison; London: University of Wisconsin Press, 1995), 199-246.

<sup>5</sup> Victor Houlston, “Moffet, Thomas (1553–1604)”, *Oxford Dictionary of National Biography*, (Oxford University Press, 2004; online edn, 2006) <<http://www.oxforddnb.com/view/article/18877>> [last accessed 11 February 2009].

<sup>6</sup> See 1.1-8 and 40.17-24 in particular. I follow Houlston in offering references in the form (page number.line number). *The Silkwormes and their Flies* (1599), ed. by Victor Houlston (Binghampton, New York: Medieval & Renaissance Texts and Studies in conjunction with Renaissance English Text Society, 1989).

<sup>7</sup> Cf. Monique Bourque, “‘There Is Nothing More Divine than These, Except Man’: Thomas Moffet and Insect Sociality”, *Quidditas: Journal of the Rocky Mountain Medieval and Renaissance Association*, 20 (1999), 137-54; Katharine A. Craik, “‘These Almost Thingles Things’: Thomas Moffat’s *The Silkwormes*, and English Renaissance Georgic”, *Cahiers Élisabéthains* (2001), 53-66. It is worth noting that *The Silkwormes* has also suffered numerous attempts to link its Pyramus and Thisbe episode with *A Midsummer’s Night Dream*. See Katherine Duncan-Jones, “Pyramus and Thisbe: Shakespeare’s Debt to Moffet Cancelled”, *Review of English Studies*, 32 (1981), 296-301.

<sup>8</sup> Duncan-Jones, 298; *Insectorum Sive Minimorum Animalum Theatrum: The Butterflies and Moths*, ed. by George Thomson (Lochnaben, [privately published], 2000), 5.

<sup>9</sup> Charles G. Nauert Jr., “Humanists, Scientists and Pliny: Changing Approaches to a Classical Author”, *American Historical Review*, 84 (1979), 72-85. For Moffet’s citation of Pliny see, for example, 3.13, 8.17, 19.9, 39.1, 51.22 and 52.1.

<sup>10</sup> See especially G.W. Pigman III, “Versions of Imitation in the Renaissance”, *Renaissance Quarterly*, 33 (1980), 1-32.

<sup>11</sup> Margaret P. Hannay, *Philip’s Phoenix: Mary Sidney, Countess of Pembroke* (New York: Oxford University Press, 1990), 113-14.

<sup>12</sup> Marco Girolamo Vida, *The Silkworm: A Poem*, trans. by Samuel Pulein (Dublin, 1750), A2<sup>f</sup>. *Oxford English Dictionary (OED)* “multiplying-glass”, n.2: “A toy consisting of a concave glass or lens, the surface of which is cut into facets so as to give numerous reflections of an observed object.” It is more commonly known now as a “miragescope”.

<sup>13</sup> Bourque, 149.

<sup>14</sup> Some other instances are: 4.1, 8.17, 22.9, 35.17, 36.17, 46.17, 52.18 and 54.11-12.

<sup>15</sup> Kenneth Muir, “Pyramus and Thisbe: A Study in Shakespeare’s Method”, *Shakespeare Quarterly*, 5 (1954), 141-53 (148).

<sup>16</sup> Moffet’s method could be usefully compared with Spenser’s in *Muiopotmos*, which exploits this particular ambiguity to develop an allegorical structure. Moffet’s reading is in no sense metaphorical: it is completely literal. This does not make the poem any less poetic, though it is less prophetic—eschatological even—than Spenser’s work. See Eric C. Brown, “The Allegory of Small Things: Insect Eschatology in Spenser’s *Muiopotmos*”, *Studies in Philology*, 99 (2002), 247-67.

<sup>17</sup> *Insectorum*, Q6<sup>r</sup>.

<sup>18</sup> Bono, 175.

<sup>19</sup> Mary Ellen Lamb, *Gender and Authorship in the Sidney Circle* (Madison, Wis.: University of Wisconsin Press, 1990), 54.

<sup>20</sup> Here the argument comes within reach of the section on natural history in Michel Foucault, *The Order of Things* (London: Routledge, 2004), 139-44. It would require a separate study to identify exactly how the “literary” focus of this study, specifically relating to the difficulty of presenting ideas, intersects and is incompatible with Foucault’s account of Renaissance natural history.

<sup>21</sup> Paula Findlen, “Jokes of Nature and Jokes of Knowledge: The Playfulness of Scientific Discourse in Early Modern Europe”, *Renaissance Quarterly*, 43 (1990), 292-331.

<sup>22</sup> Michel Riffaterre, *Semiotics of Poetry* (London: Methuen, 1980), 165.

<sup>23</sup> Craik, 62.

<sup>24</sup> Whereas nature, as a metaphor for God, is comprehended by cultural cross-reference, God’s Word itself is interpreted through internal references. Moffet’s marginalia appeal to an intertextual frame of reference, while the Geneva Bible’s notes, for example, indicate intratextual correlations.

<sup>25</sup> *Insectorum*, R1<sup>v</sup>. English translation from *The Theater of Insects*, that first appeared as the third item in Edward Topsell, *The History of Four-Footed Beasts [...]* (London, 1658), 4S5<sup>v</sup>.

<sup>26</sup> Bourque and Craik find poetic unity through the social programme or critique they claim Moffet proposes.

<sup>27</sup> Houlston also mentions 35.17, 48.13, and 50.19; there are other moments too, e.g. 29.18-19.

<sup>28</sup> *Insectorum*, Q5<sup>r</sup>. (*Theater*, 4S4<sup>r</sup>).



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<sup>29</sup> *Insectorum*, A1<sup>r</sup>; *Theater*, 4F5<sup>r</sup>. *OED*, “forge” v.1 and 5, “to fashion” and “to make something in fraudulent imitation” both date from the 14<sup>th</sup> century.

<sup>30</sup> *Theater*, 4F1<sup>r</sup>.

<sup>31</sup> The differences between print and manuscript distribution of Moffet’s texts deserves further discussion in light of this point. See G.L. Bruns, “The Originality of Texts in a Manuscript Culture”, *Comparative Literature*, 32 (1980), 113-29; David Quint, *Origin and Originality in Renaissance Literature: Versions of the Source* (New Haven: Yale University Press, 1983).