

Editor's Notes

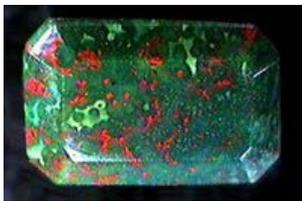
This inaugural issue of *Heliotropia* was first announced during a roundtable hosted at the 2003 AAIS conference in Washington. It was then that we were publicly asked why the name *Heliotropia* had been chosen for this journal. Although a preliminary explanation was offered at that occasion, it seems proper to trace here a rather more detailed background of the question for the benefit of those who may, like our initial audience, be wondering what lies behind the name.

The title is an allusive nod to the heliotropium in all its various realities. In addition to being a multiform plant of the borage family (Boraginaceae) and a chalcedonic mineral known more commonly as jasper or bloodstone, it is also a gnomon (the metal triangle or pin on a sundial whose shadow indicates the solar time of day). Each of these three types has its own distinguished historical lineage and each was well known to Boccaccio who of course refers to the stone in *Decameron* VIII.3. What is perhaps most interesting, however, is the fact that despite (or because of?) the heliotrope's great popularity, there is very little precision throughout the centuries in the use of the term. Everyone recognizes its importance yet there is an abundance of space for interpretive speculation, a situation not at all unlike that of literary studies. This unusually fertile polysemy, it seems to me, makes the heliotrope an ideal emblem for a journal dedicated to the study of Boccaccio who, as we all know, was intensely interested in intellectual syncretism. What matters most in names ("dicendum quod denominationes consueverunt fieri a perfectiori," as Aquinas reminds us) is that they be references, however subtle, to elements of a tradition. Because we respect both the historico-linguistic background of the heliotropium and the sensibilities of our readers who, like most medievalists, prefer to identify *perfectiores* for themselves, there will be no clear explanation of the title here. Instead, I will simply trace some of the more interesting aspects of the heliotropium and graciously leave the matter open for further conjecture.

The most fundamental aspect of the heliotrope (ἡλιοτρόπιον), in all its manifestations, is its predilection for following the sun (ἡλιος + τρέπω). This characteristic makes its use possible in a wide variety of connotations.

It would appear that the first use of the term is in reference to the gnomon, which was invented by Pherecydes. More interesting, in this web of references, is the fact that Pherecydes was a friend and contemporary of Thales of Miletus, recognized for his knowledge of astronomy by Boccaccio in the *Esposizioni*. One may well imagine a sunny summer solstice during the early sixth century BC on the island of Syros: Pherecydes is explaining to Thales how the shadow of this little heliotropium assists in astronomic observations... Thales, years later, travels with the trusty sundial under his arm to Egypt where he, with some new ideas about geometry, succeeds in predicting a solar eclipse. His written works may have contained an acknowledgment to Pherecydes for the tip (“all eventual errors are mine...”), but because they went missing centuries ago we will never know the precise role that his friend’s invention played in Thales’ swift rise to fame. Most of what remains are the general assumptions that Thales was the “first Greek philosopher” and the first of the Seven Sages. In the nineteenth century, Heliotrope is the name given by surveyors to a small, costly instrument used for large triangulation surveys (twenty miles or more). Its mirrors were used to reflect light over long distances on sunny days with low atmospheric disturbances. Produced in the 1880s by Fauth & Company, it was used with great success in the first substantial U.S. Coastal Survey. These two anecdotes, separated by roughly 2500 years, are sufficient for the time being to exhaust the third and least significant etymological branch of the question at hand.

Far more intriguing are the stones that go by the name heliotropium. The mineral in question, also known as bloodstone, is an opaque dark



the bloodstone

green chalcedony with red spots caused by the presence of iron oxide. Early Christian legends held that these red streaks came from Jesus’ blood that fell on a piece of jasper at the foot of the Cross. Though most heliotropia came to the Mediterranean region from India, it was commonly thought that they were to be found in abundance in other areas. Our most tangible

ancient source comes from Pliny the Elder who explains, “Heliotropium nascitur in Aethiopia, Africa, Cypro, porraceo colore, sanguineis venis distincta.” What he says a bit later in the paragraph is picked up by several authors who transmit this “scientific knowledge” to the Middle Ages:

Causa nominis, quoniam deiecta in vas aquae, fulgore solis accidente, re-percussu sanguineo mutat eum, maxime Aethiopica. Eadem extra aquam speculi modo solem accipit deprenditque defectus, subeuntem lunam ostendens. Magorum inprudencia vel manifestissimum in hac quoque ex-

emplum est, quoniam admixta herba heliotropio, quibusdam additis precationibus, gerentem conspici negent. (*Nat. hist.* XXXVII.10.60, § 165)

The main stages in this early chemistry experiment — for those who want to add it to their syllabus — are: 1. Put the heliotrope (preferably of the Ethiopian variety) in a bucket of water; 2. Witness the lightning and resulting blood red eclipse; 3. Arrange for some magicians (or perhaps better, occultist scientists) to throw into the mix a handful of heliotrope leaves while uttering some prayers; 4. Watch as they disappear into thin air. While Pliny himself is skeptical of the wizards' ability to become invisible (as is Isidore of Seville who reproduces Pliny's version almost verbatim [*Etym.* XVI.7.12]), this magical tradition is disseminated with enthusiasm in the *De virtutibus lapidum*, an obscure text attributed to Damigeron. Its material seems to be derived from a Greek poem called *Lithica* ascribed to Orpheus and perhaps first written down in the fourth century. The Latin Damigeron (ca. fifth or sixth century) claims to be a translation made for Tiberius by someone called Evax whose name is sometimes used as a label for the work itself. Using Damigeron (XIX) as his principal source, Marbod of Rennes (d. 1123), better known nowadays for his experiments in the *boudoir* than in the *laboratoire*, elaborates upon this transformational process in his *Liber lapidum seu de gemmis*, which is also sometimes called Evax or simply *Lapidarius*. According to Marbod, not only does the alchemist who performs this experiment become invisible, however; he also gains lithomantic powers: “se quoque gestanti dat plurima vaticinari, / atque futurarum quasdam cognoscere rerum” (§ 29). What is more, Marbod asserts that the bloodstone constricts vascular circulation and expels poisons. He who carries it enjoys an enhanced reputation and increased longevity. Indeed, no one who carries the heliotrope can die while it is in his possession. This is the direct source of Arnold of Saxony's comments on the heliotrope (in his *De finibus rerum naturalium*) as well as of those by the Dominican preacher Thomas of Cantimpré (in his *De natura rerum*) who tries his level best to interpolate additional information from Biblical commentaries. Bartholomew of England, a Franciscan scholar and author of the *De rerum proprietatibus* (finished by 1230), conflates Pliny, Isidore and Marbod, repeating the part about the bloodstone's magical powers, but throws in a not-so-convincing comment about the “stultitia magorum” (XLI). Albert the Great, like Thomas of Cantimpré whom he had met, was rather disturbed by all these supernatural claims. He knew both the Pliny and Damigeron traditions but strove to reconcile them with science. In his *De mineralibus* (II.2), he explains the eclipse not as an astronomical phenomenon but simply as a result of all the vapors exuded by

the stone when dropped into water; the sun is obscured by the condensing cloud and merely appears blood red. He remarks that necromancers say the gem is Babylonian in origin and relates the alleged prophetic powers of pagan priests who combine it with incantations. He does not qualify, however, the claim that the heliotrope, when rubbed with the plant of the same name, renders invisible whoever carries it. In spite of his moderate views on mineralogy (and the notoriety of having been Aquinas' teacher), Albert gains the reputation of being rather unorthodox by the early fourteenth century. This is due in part to the appearance of a treatise called *Libellus de alchimia* that is regularly though falsely attributed to him, most probably because Albert was indeed well read in alchemy, about which he cites several authorities such as Hermes Trismegistus (whose *Tabula smaragdina* he knew) and Avicenna (under whose name circulated a wide variety of treatises including the *De anima in arte alchimiae*).

The Damigeron-Marbod tradition — which is steeped in the transgressive and the supernatural — is that chosen by the “other” literature of the Duecento, the *filone perdente* overshadowed by Dante. In this line is the *Intelligenza* and what Contini called the “anti-*Commedia*,” Cecco d'Ascoli's *Acerba* (III.17):

Elitropia, che è detta l'orfanella,
Verde è del corpo con sanguigne gotte:
Marte la forma con la trista stella.
Nell'acqua fredda dove il Sole spire
Se questa metti, parrà che ciangotte
L'acqua fervente per lo gran bollire.
Anche, se metti questa in acque chiare,
Sì che lo raggio del Sol la percota,
Sanguigna l'aria subito traspare
Sì che lo Sole a noi si mostra oscuro
In fin che questa pietra sia remota.
Con questa può, chi vuol, essere furo.
Giunta con questa l'elitropia pianta,
Come la calamita il ferro sugge,
Così, sugando, il nostro viso incanta.
Restrigne il sangue quando è l'uom ferito;
L'aspro veleno da lei si distrugge;
Chi seco l'ebbe non fu mai fallito.

In the *Intelligenza*, heliotrope is associated with hematite (anhydrous ferrous oxide: Fe₂O₃ for the mineralogists), which was said not only to assist with serpent bites but also to act as a coagulant (XLII.1–9). At some point, perhaps in the twelfth–thirteenth centuries, there is a convergence of the heliotrope's “accepted” power to make one invisible and its benefit in spe-

cifically counteracting serpent bites. We see this confluence of ideas in a few glosses of *Inferno* XXIV.91ff where the thieves are eternally accosted by the wonderful six-legged lizards. Almost all of the ancient *glossatores* cite Albert the Great (whose work is unclear) as the *auctoritas* and mention that the heliotrope stone must be united with the plant of the same name in order for the invisibility trick to work, and a few cannot help hypothesizing that there is also an anti-venom in play. Jacopo della Lana writes: “Elitropia si è / una preda preziosa, la qual scaza li serpenti e per consequens / lo veneno: e simile ... è una erba la quale scaza 'l tosego.” Benvenuto da Imola (who as we know attended Boccaccio’s lectures in S. Stefano and perhaps discussed with him this canto to which, alas, our author never publicly arrived): “Ideo bene fur voluisset libenter invenire heliotropiam, ut fugeret infamiam, acquireret salutem, et vitaret venenum serpentis persequentis.” Buti: “Elitropia è una pietra che, secondo che dice il Lapidario, vale contro a’ veleni, sicché questi miseri peccatori non sperano rimedio a le morsure e punture dei serpenti.” It is not until the later Trecento that the stone itself (without the water and the plant) is capable of rendering its bearer invisible (as we see in the *Chiose selmiane*, for instance). Boccaccio’s story of Calandrino and the heliotrope belongs to this popular current, as does Sacchetti’s offhanded mention of the heliotrope in his discussion of the invisible qualities of the holy wafer (*Sposizioni* XLIV) and, even more significantly, as a red herring (“l’elitropia di Calandrino”) in the meaningful lesson of Messer Valore de’ Buondelmonti (*Trecentonovelle* LXVII). By the Renaissance *Inferno* XXIV and *Decameron* VIII.3 become the best known examples of the use of the term “elitropia” in mainstream Italian literature; in fact, they are the only two cited in Acarisio’s *Vocabolario, grammatica e ortografia della lingua volgare* (1543).

However, if we follow the above-mentioned *filone perdente*, we see that there is an undercurrent of didactic writers, such as Fazio degli Uberti (who we recall “met” Pliny) in his *Dittamondo*, who continue to prefer the rather more complex perspective on the stone’s powers (V.17):

Così andando, ancor mi fece copia
d’alcuna pietra, che di là si trova,
e cominciommi a dir de l’elitropia:
«Questa, nel mondo, è molto cara e nova,
di color verde, salvo che un poco
è più oscura che ’l verde non prova,
gottata di sanguigno a loco a loco,
e, se si pone in acqua u’ sol non traggia,
par ch’essa bolla come fosse al foco.
E chi la mette là, dove il sol raggia
in chiara fonte, l’aire intorno oscura

e 'n sanguigno color par che ritraggia.
 Util si crede a colui che fura;
 similmente voglio che tu sappia
 che 'l sangue stringe a l'uom per sua natura.
 Ancor mi piace che nel cuor ti cappia
 ch'al nostro viso, fuggendo, si vela
 chi con l'erba sua sora l'accalappia...»

The properties described here should by now seem rather familiar inasmuch as they are inherited directly from the medieval scientific tradition that we have just reviewed. So far, nothing new. What now becomes intriguing for those who enjoy filling in crosswords and cross-checking footnotes is that Pulci's reference to the heliotrope (*Morgante* XXV.204), largely ignored in even the best editions, makes much more sense once one puts it into this larger context. The octave reads:

Disse Astarotte: – E' fia per certo: aspetta
 tanto ch'io mandi insino in Etiopia,
 e porteratti uno spirto una erbetta
 che può far questo, e non pure elitropia;
 e basta sol ch'adosso te la metta,
 ché così è la sua natura propria;
 e dove manca ragione o scienza,
 basta al savio veder la sperienza. –

While Astarotte claims it is not only the heliotrope that renders its bearer invisible, it is in fact the only Ethiopian export known for this property. Pulci's admission, moreover, that he was a great fan of Cecco d'Ascoli (*Morgante* XXIV.112) would suggest a possible parallelism for this comment in the *Acerba*. Perhaps not surprisingly, it takes little effort to locate something useful (I.8):

Principio d'ogni bene è conoscenza;
 Prima sii bono innanzi che abbi faccia;
 Intendi e vedi con la mente a scienza
 Che mai l'eterna beata natura
 Senza ragion non fece creatura.

If this is indeed the precise source is of course less important than the fact that the combination of “scienza” and “ragione” in medieval letters is very often an allusion to the larger discussion of man's acquisition of knowledge (cf. *Convivio* IV.12 and/or *Summa Theologiæ* Ia.79.4, ad 3). Whether we are talking about a pilgrim looking for an inn or Aquinas' conception of our progressive cognition of universal natures, what remains unaltered is the medieval epistemological notion that experience is subservient (not alternative) to the gathering of information. Although intel-

lectuals of the modern age tend not to lose much sleep over the idea that no one knows exactly how aspirin works, this indifference would not have gone over well with thinkers of the Middle Ages. The only acceptable *quia* here, *umana gente*, is that which is ultimately backed up by the *quid* provided by theology. Astarotte was a theologian of sorts, but a demon-philosopher as well. That experience could serve as a substitute for reason or science was an idea that could get a person into lots of trouble. Cecco d'Ascoli died at the stake as a heretic in 1327; Pulci, despite his confession of 1481 and the personal tutoring of the humanist friar Mariano da Genazzano, never managed to convince Franco and Ficino that he had "abandoned" his heretical philosophies. Now, does this mean that the pre-modern mineralogists were doomed to excommunication? Naturally, no. What is fascinating though is that virtually all of the references to heliotropes that come up in the OVI are basically divisible into two camps: the winners and the losers, as we casually defined them earlier. Among the former are Dante and Boccaccio (with Sacchetti close behind) and among the latter are the allegorist-didactic writers like Bartholomew of England (translated and promoted by Vivaldo Belcalzer) and those who made the greatest use of his encyclopedic *De rerum proprietatibus*, including the author of the *Lapidario Estense* and Cecco d'Ascoli. What these "losers" have in common is the ideal of a functional and pragmatic system of knowledge, or *ragione*, not necessarily tied to a theological system, and the fact that the Dominicans tirelessly persecuted their way of thinking. (A retrospective retaliation against the invocation of Albert in alchemical texts?) This is all reflected quite nicely, even if at first blush coincidentally, by their take on the uses and powers of the bloodstone. Once Boccaccio implicitly debunks the capacity of the heliotrope to render its owner invisible, only the occultists believe in the magic of the stone. One example in this regard should suffice: Heinrich Cornelius Agrippa (1486–1534/5), noted Neoplatonist, Cabalist and Lutheran sympathizer. He returns, quite unabashedly, to Albert the Great for his description of the heliotrope in his *De occulta philosophia* (I.23). In the two hundred odd years that passed between the compilation of these medieval lapidaries and the first publication of the *De occulta philosophia*, alchemy had begun to get some bad press. Agrippa was admittedly more than the mad magus often depicted in children's books with the conical hat full of moons and stars. Nevertheless, a good deal of sixteenth-century popular culture had already turned a skeptical shoulder to astrologists, numerologists and even theologians who studied the essences and principles of physical matter. One need think only of the title character of Ariosto's *Negromante* who eschews the use of the heliotrope (act III, scene 3) for making Camillo invisible, saying

“volendovi mandar al modo che dite invisibile, trovar bisognarebbe una elitropia; et a sacrarla, et a metterla in ordine come si debbe non abbiamo spazio.” The trickster astrologer suggests instead (à la Boccaccio) that Camillo simply get inside a chest that will be left in Emilia’s bedroom. In a very similar vein, Boccaccio is evoked in a further comical degradation of the heliotrope by Annibal Caro in his *Gli straccioni* (act IV, scene 5). Despite their very real contributions to chemistry, metallurgy and pharmacology, Renaissance alchemists had by this point lost a great deal of charm. This tendency continues more or less unmitigated to the early nineteenth century where it is finally recodified (for vastly different purposes) in the classic work of Mary Shelley. In the second chapter, we read young Frankenstein’s reflections on his youthful readings:

Natural philosophy is the genius that has regulated my fate; I desire therefore, in this narration, to state those facts which led to my predilection for that science. When I was thirteen years of age, we all went on a party of pleasure to the baths near Thonon: the inclemency of the weather obliged us to remain a day confined to the inn. In this house I chanced to find a volume of the works of Cornelius Agrippa. I opened it with apathy; the theory which he attempts to demonstrate, and the wonderful facts which he relates, soon changed this feeling into enthusiasm. A new light seemed to dawn upon my mind; and, bounding with joy, I communicated my discovery to my father. I cannot help remarking here the many opportunities instructors possess of directing the attention of their pupils to useful knowledge, which they utterly neglect. My father looked carelessly at the title-page of my book, and said, “Ah! Cornelius Agrippa! My dear Victor, do not waste your time upon this; it is sad trash.” ... When I returned home, my first care was to procure the whole works of this author, and afterwards of Paracelsus and Albertus Magnus. I read and studied the wild fancies of these writers with delight; they appeared to me treasures known to few beside myself; and although I have often wished to communicate these secret stores of knowledge to my father, yet his indefinite censure of my favourite Agrippa always withheld me. I disclosed my discoveries to Elizabeth, therefore, under a promise of strict secrecy; but she did not interest herself in the subject, and I was left by her to pursue my studies alone.

Young Victor had been diligently applying himself in the quest for the philosopher’s stone and the elixir of life when he witnessed the proverbial “dark and stormy night” at the family home in Belrive. The philosopher’s stone was, naturally, that object which would cure illnesses, prolong life and bring about spiritual revitalization. It was often thought to be a very common substance but one that was unrecognized and unappreciated (Harry Potter notwithstanding). While one must stop short of claiming to

recognize in this description the heliotrope, it is clear that we were semantically never very far away...

Before we close this somewhat disjointed series of reflections, we must perforce consider the heliotropium as a plant. Beyond Interflora's announcement some months back that the heliotrope is "la pianta da terrazzo per il 2003" (who knew?), there really are some genuinely interesting things to consider here. Though one would be hard-pressed to decide which came



heliotropium europaeum

first, the stone or the flower, the etymological clues seem to make more sense when related to the plant. Even in English, we have a range of names variously given to the heliotrope that are rather more descriptive in nature. Among these popular names are turnsol, solsequium and sunflower (it remains unclear to me precisely why Australians call it "potato weed"). There is a range of uncertainty in vernacular jargon, going as far back as the Greeks, as to exactly which plant is being mentioned in any single passage. This said, we might simply say that the plant in discussion here is that which turns its flowers toward the sun throughout the day. Tradition has it that the Oceanid Clytie, who had for some time been Helios' lover, was greatly angered by his having fallen in love with the eastern princess Leucothoe. She told Leucothoe's father of Helio's seduction and the king had her buried alive. Helios, who arrived too late to save his lover (whose corpse according to legend was transformed into frankincense), was extremely irritated with Clytie's betrayal and refused to forgive her. She pined away without food or drink, it is said, while watching the course of the sun with her eyes. She, you guessed it, changed then into the heliotropium. Ovid concludes her moving story as follows (*Met.* IV.266–70):

Membra ferunt haesisse solo, partemque coloris
Luridus exsanguis pallor convertit in herbas;
Est in parte rubor violaeque simillimus ora
Flos tegit; illa suum, quamvis radice tenetur,
Vertitur ad Solem mutataque servat amorem.

This lyrical idea of the plant's devotion to the sun inspired Aldhelm, bishop of Sherborne (d. 709), to include it in his famous book of 101 riddles, but without any mention of its medicinal benefits. In the ancient world the heliotrope (sometimes under the name helioscope) was thought to alleviate snake bites and scorpion stings, cure sunstroke (especially in children) and drive away warts (*Nat. hist.* XXII.21.29, § 58–59 and cf.

Etym. XVII.9.37). By antonomasia, it becomes for the Middle Ages the verrucaria herba par excellence. Nowadays (despite its presence on the FDA's list of poisonous plants) you can buy it on the Internet for a range of ills: from clergyman's sore throat to uterine displacement. It may well be that some of the attributes of the heliotrope plant passed to the stone of the same name. Pliny's mention of the herb as an anti-venom (which he says he takes from the writings of Apollodorus and Apollophanes) is most likely at the root of Marbod's assertion that the stone extracts poisons and of the above-mentioned glosses of Jacopo della Lana, Benvenuto da Imola and Francesco da Buti to *Inferno* XXIV.

With the discovery of the New World came the discovery of a new variety of heliotrope (*heliotropium peruvianum*) that was much more fragrant than its European relative. It made a big hit with Giambattista Ramusio and other encyclopedists of the day. Among those who subsequently most praised it were Alexander Montgomerie and Francesco Redi, big-wig of La Crusca and one of the chief contributors to their *Vocabolario* (although it was later revealed that he had slipped in a good number of false citations), who was perhaps best known for having deflated the legend of the spontaneous generation of insects. By the seventeenth century, it seems, the botanic branch of the heliotrope's history had extended well into the realm of hard science, leaving behind its previous association with alchemy and the bloodstone. The last gasp for the allegorical or symbolic take on the plant comes from Jeremias Drechsel (1581–1638), Jesuit professor of humanities and rhetoric at Augsburg and Dillengen. Though his works were wildly successful among his contemporaries (including *Zodiacus Christianus* [1622] and *Trismegistus* [1624]), he is largely unknown today. In his *Heliotropium* (1627, subtitled *Conformity of the Human Will with the Divine Will*) Drechsel uses the figure of the sun-following heliotrope to represent the Christian seeker of knowledge. From this point forward, the Peruvian heliotrope is the most mentioned variety in Italian letters on account of its sweet perfume. It shows up in Aleardi, Carducci and D'Annunzio, for example, but without any real significance to medievalists.

To return to this brief essay's point of departure (and to attempt a useful synthesis of all the foregoing miscellany), we can roundly say that the heliotrope — or “heliotropia” in its Late Latin form — is dedicated to and follows the sun in a variety of its symbolic meanings. The Sun, Cirlot reminds us in his *Dictionary*, is an ancient allegorical entity of knowledge. In India, as Sûrya, it is the eye of Varuna; in Persia it is the eye of Ahuramazda; in Greece Helios, the eye of Zeus or Uranus; in Egypt the eye of Ra; in Islam the eye of Allah. It is vision in its most inclusive significance. For the alchemists, it corresponds to gold or philosophical sulfur. It is seen

in various personalities such as Sol in homine, Sol invictus, Sol salutis, Sol iustitiae and even Sol niger, “prime matter,” which comes into play in the eclipse brought about by dropping the bloodstone into water. For the medieval thinker in particular, with whom most of our readers are surely most concerned, the sun is immediately associated with God for its powers of illumination, radiation and agricultural fecundity. It and the Tree of Life (or Tree of Knowledge or the True Cross) work together to regulate the universe. The bible provides numerous solar associations, from Ps. 84:11 (sun as deity) to Matt. 13:43 (the righteous shone as the sun), and Christ is often seen as the “new Sun” of Justice and Truth. It is perhaps the most extensive of all sources of medieval allegory beyond Christ Himself. In Christian iconography, the sun not only appears in its immediately recognizable form, but also as the nimbus that adorns holy and powerful figures. (Interestingly, there exists a stained glass panel in St. Rémi in Reims in which heliotrope stems emerge from the nimbuses of St. John and the Virgin as they witness the death of Christ.) Indeed, a full rendering of the symbology of the sun in the Middle Ages would require dozens of volumes; suffice it to say that there was no one who did not perceive in the fiery star some sort of underlying abstract meaning. From the birth of Italian literature (e.g. *Cantico di frate Sole*), the sun has always been present and always held special meaning for Boccaccio’s two greatest models: from the first canto of the *Inferno* to the last poem of the *Canzoniere*. The heliotrope (or in our case *Heliotropia*) is that which follows this Sol Sapientiae. It is relevant to the theologians as well as to the alchemists of our profession and — why not? — maybe even to a Frankenstein or two.

MP