

# thecreepinggarden

Produced and Directed by  
**TIM GRABHAM AND JASPER SHARP**

With  
**MARK PRAGNELL, HEATHER BARNETT, BRYN DENTINGER  
TIM BOON, ANDREW ADAMATSKY, KLAUS-PETER ZAUNER  
JEFF JONES, ELLA GALE, EDUARDO RECK MIRANDA**

Photography  
**TIM GRABHAM, CLARE RICHARDS, BEN ELLSWORTH, TOM SWINDELL**

Aerial Camera  
**RICHARD HUGHES**

Original Soundtrack  
**JIM O'ROURKE**

Opening Title and Closing Credits Music  
**WOOB**

Physarum Musification  
**EDUARDO MIRANDA, EDWARD BRAUND**

Sound Mix and Mastering  
**PAUL PASCOE  
CHURCH ROAD RECORDING CO.**

End Credit Illustrations  
**ANGELA MELE**

Editor  
**TIM GRABHAM**

Research and Interviews  
**JASPER SHARP**

Post-Production  
**CINEMA ILOOBIA**

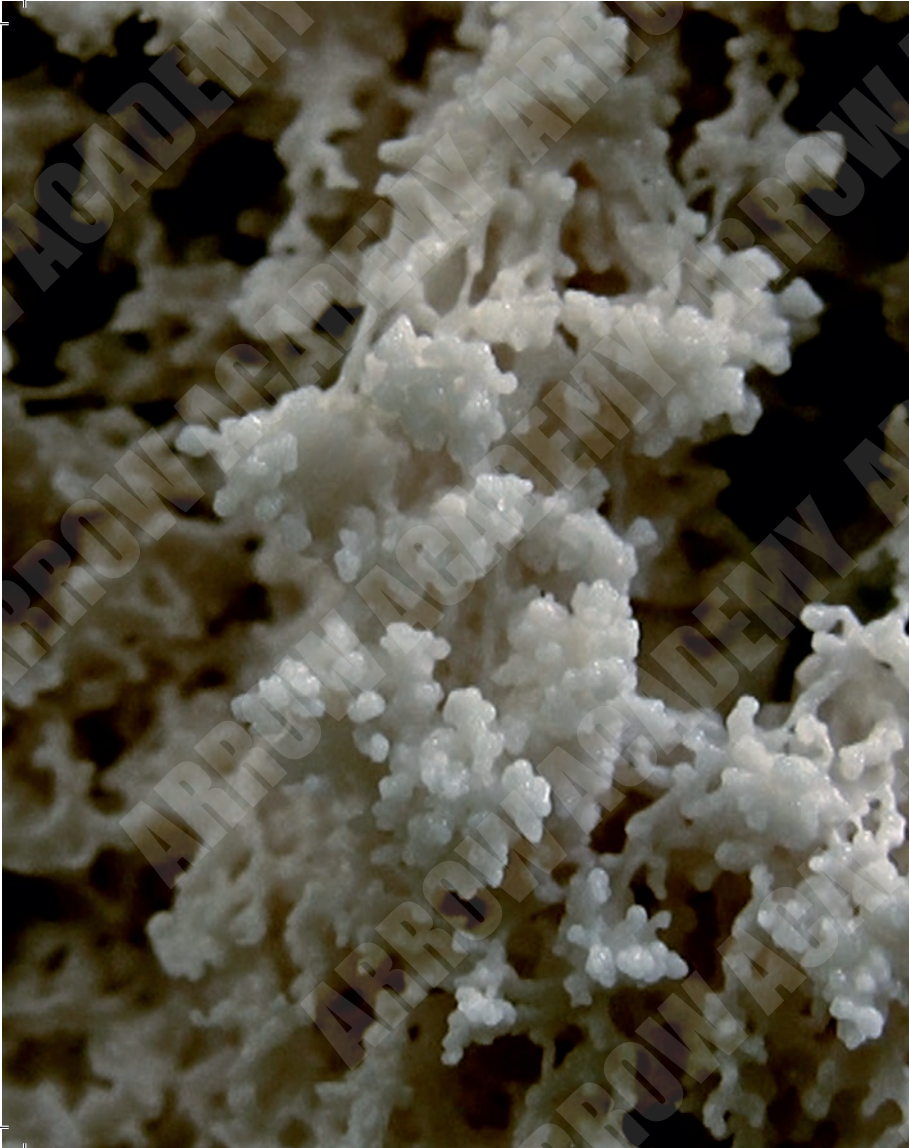
3D Spore Animation  
**DUNCAN BROWN**



The background of the page is a black field filled with numerous microscopic specimens of Myxomycetes. These organisms appear as intricate, multi-lobed, and often spherical structures with a complex, porous, or cellular internal structure. They are rendered in shades of light brown, tan, and beige, with some showing a distinct ring-like or chambered appearance. The specimens vary in size, with a large, highly detailed one on the right side and many smaller ones scattered throughout. A faint, repeating watermark of the text 'BROW ACADEMY' is visible diagonally across the entire image.

## contents

- 2 **Cast and Crew**
- 7 **Articulating the Organism:  
The Genesis of The Creeping Garden Documentary** by Jasper Sharp
- 18 **Gallery of Selected Myxomycetes Specimens in the Collection of the  
South London Botanical Institute**
- 30 **About the Transfer**



## articulating the organism: the genesis of the creeping garden documentary

by Jasper Sharp

When Tim and I first embarked on our research for *The Creeping Garden*, all that we knew was that slime moulds, or *myxomycetes*, were not animals, plants nor fungi, but that they moved of their own accord and that in their search for food they manifested goal-directed behaviour that some have described as “intelligent” (Toshiyuki Nakagaki, Hiroyasu Yamada and Ágota Tóth’s article ‘Maze-solving by an Amoeboid Organism’ in *Nature* 407, published 28 September 2000, appears to be the first source to have attributed the organism with a form of “primitive intelligence” and has proven very influential on subsequent discussions on this matter).

The first reasonable questions anyone might ask, then, would be “What is a slime mould? What does it do? What is its role in the natural order of things?” I am still not entirely sure I can give satisfactory answers to any of these, but I think that the very human-centric nature of this line of inquiry throws up other issues that are worthy of consideration.

In this respect, one might say that *The Creeping Garden* isn’t even really about slime moulds, or at least, it isn’t only about slime moulds. Following on from the observations of one of our main contributors, Heather Barnett, an artist inspired by biological design, it is also about metaphors and analogies. The intrinsic beauty of the pulsing vein-like networks formed by this life force as it forages for food during its vegetative plasmodial phase derives from its resemblance to so many of the patterns we perceive in our natural environment, from tree branches and river estuaries through fan corals and the human nervous system all the way into the more abstract domain, of emergent systems such as traffic flows and the virtual world of the internet.

Could the slime mould be a metaphor for life, the universe, and everything?

Analogies are like stick men. They are easy to draw. However, it is for this reason that so many individuals from different backgrounds – the academic, the amateur, the artistic – have been attracted to the study of an organism that shifts through four distinct states



during its life cycle, of which its ectoplasmic materialisation during the plasmodial stage represents but one. In the process, the networks emerging among these individual researchers represent another level of analogy with slime mould behavior.

The scientific study of slime moulds might not seem to yield immediate solutions to any of the world's problems, hence what little scientific research that is being done on them is woefully underfunded, and ironically, much of it is being undertaken outside of the field of raw biology. However, it has offered insights applicable to other domains, and is inspiring intriguing research in a variety of areas, from city planning to robot design.

One of the touchstones during the conception of *The Creeping Garden* was Werner Herzog's Antarctic-set documentary, *Encounters at the End of the World* (2007). What appealed to me in particular about Herzog's approach was that he clearly wasn't interested in making a documentary about Antarctica, nor its wildlife or geography. It was emphatically not about penguins (except for the odd aberrant ones that went charging off from their colony into the frozen wilderness towards a certain death). Instead the focus was on the individual dreamers and grafters within the small community who, for whatever reasons, had been drawn to this remote, polar environment; from glaciologists, biologists and volcanologists through to cooks, mechanics and forklift drivers. The most absurd of these, perhaps, was the scientist studying neutrinos, who is both geographically at the extreme end of the world, and figuratively at the abstract extremes of theoretical science, looking for something that, to all intents and purposes, may not even exist, something that might as well belong to another dimension to mankind as far as its impact on our daily lives goes.

For all such eccentric portraits, however, the film fits well within the usual Herzog method in exploring this relationship between the human and the environment, the rational interior domains of the individual and the surrounding chaos that we strive to assimilate into our schemas of how the world should behave; ultimately how nature and scientific knowledge can only truly be conceived of in human terms.

The slime mould does exist, of course, but it was its sheer obscurity, the dearth of readily-available information about it and its invisibility to those not actively looking for it that originally got us hooked. Of equal interest, as much as the mysteries of the organism itself, was what had prompted other people to tumble down this same rabbit hole. What was the source of their interest, and how had this shaped their understanding of the world?

In articulating these questions, both Tim and I became thoroughly aware that our own budding fascination with what we might term "myxomycology" and our attempts to explore and explain this curious creature (if, indeed, we can call it a creature) through the

medium of film were complementary to our contributors' attempts at expanding the overall knowledge base. We realized that in recording slime mould behaviour in as much detail as possible with the means we had available, we were embedded within a similar process of practical research.

Our approach to portraying what a slime mould "is" was therefore framed through the distinct prisms of each of these contributors by, as Tim has phrased it, "observing and immersing the audience into the worlds of the observers and the observed." Be they mycologist, artist, computer scientist or musician, all of our human subjects had their own different relationships with the organism, which combined together, we hoped would elucidate its various aspects to give a better overall understanding of an essence that could never be truly understood in its totality.

In all of this, we also wanted to invoke the possibility of the slime mould itself as an active collaborator, entertaining the question of what we are to it and how it looks upon us. In order to negotiate its way through its environment, the organism senses the world in a very different way from humans, in terms of its perception of light, smells and, most notably, time. And above all, they creep very slowly...

The obvious fact that dawned on us was that our human-centric view of the world has been intrinsically conditioned by our own perceptions, primarily of vision and hearing, and that this has been reinforced by technologies of recording and reproducing the external environment (i.e. the movie camera, audio recorder). However, the resulting consensual reality is a reality in only a limited sense, and a reality quite divorced from the perceptual world of the slime mould. This seemed something that might be very interesting to explore on film.

The implications of this were quite mindboggling, as they prompted a further question - If the slime mould can be described as being in any way intelligent, or at the very least, as possessing an internal logic of its own, even if it isn't akin to human logic, then there must be some way of a human intelligence interacting with it. What insights might we gain from such an exchange?

We find ourselves approaching the realms of science fiction here, and it was in this respect that we considered the subject most ripe for cinematic treatment.

In a sense, the book *The Creeping Garden: Irrational Encounters with Plasmodial Slime Moulds*, published just prior to the film's North American theatrical release, represents the "overflow" of our production process. The role of the documentary, as we saw it, was



to reveal a hidden world and present it in a manner that would pique further curiosity. It was not to detail every known aspect of the slime mould and the research it has inspired exhaustively. To do so would result in such a dense barrage of information, we could run the risk of shutting off any interest entirely. The viewer would be too busy listening to the facts elicited from our contributors to be osmosed within the lush visual world of forms and colours.

The key was to strike the tricky balance of knowing when to prune back, to gauge how much scientific background was necessary before entering this irrational domain, without pitching the material at the level of the lowest common denominator. However, at the same time it was important to realize the limits of most people's knowledge about such specialist fields as biology and computer science, including our own. The aim of the book was therefore to flesh out this background information in a way that was still accessible to the casual reader, and one who perhaps hadn't seen the film.

The one sense in which writing books and making films is alike, and undoubtedly the most exciting thing about the creative process, is that when you set out, you never really know in which directions your quest for knowledge will lead you and what you are going to come up with at the end.

From the point of view of someone who has authored a number of books on cinema, I have always loved the research aspect - the gathering information, the following leads, the construction of a bigger mental picture etc. The actual writing itself, however, I find rather a hard slog.

In that sense, the filmmaking process had obvious appeals. In the capacity of researcher and interviewer, my main task was to identify the areas we wished to cover, isolate the questions we wanted answered, and find a suitable person involved in these areas to answer these questions for me. We had a vague idea of where these responses would lead us, but not total control over the whole process in the same way that I would while writing, inasmuch as I didn't need to articulate the ideas we were trying to get across so precisely. This task largely fell to Tim, of course, who at the filming and editing levels was responsible for the lion's share of the hands-on work, of shaping and giving visual form to the material.

For various reasons (related to making the film in our free time while scavenging around for financial support in order to more fully realize our ambitions for it), *The Creeping Garden* took almost three years to make. However, this relatively long gestation period in many ways worked to our advantage, in that as well as really giving us time to get to know our

subject more thoroughly (again, Tim's time-lapses were refined over a period of several years), it also allowed us to meditate more thoroughly on the relationship between form and content.

We began this journey not really even sure what a slime mould looked like in the wild, what kind of habitats they favoured, and how common they were. And then, following the discovery of our first natural specimen completely by accident while out with my then 2-year-old son (the sulphurous yellow *Fuligo septica*, which goes by the delightful name of the Dog Vomit slime mould, seems to be the first species most people encounter in the wild), we began seeing them everywhere, or at least certain species of them.

And just as we began to find it increasingly easy to spot slime moulds in their natural habitat, following Heather Barnett's ideas about the slime mould as metaphor, so too did we begin seeing metaphors everywhere – like the way in which all of our subjects appeared to be interconnected as part of a big abstract network of knowledge and activity; like the research process itself, during which new nuggets of information, footnotes in a passage of text, or certain passing comments by our interviewees pointed towards new paths of enquiry, which snaked out like the slime mould's plasmodial tubes as they search for sustenance.

As the artist herself stated in one of our earliest meetings, the slime mould itself was less her subject than her collaborator, a material which can be guided to some extent, but ultimately can't be controlled entirely. In a similar way, this cryptic self-organizing living material has provided Tim and me with an unlikely muse, leading us on a journey into the unknown, the trails of which are now left in the images of this film and the words of the accompanying book.

*Edited from the companion book The Creeping Garden: Irrational Encounters with Plasmodial Slime Moulds by Jasper Sharp and Tim Grabham, published by Alchimia Publishing in 2015.*





GALLERY OF SELECTED MYXOMYCETES SPECIMENS IN THE COLLECTION OF THE SOUTH LONDON BOTANICAL INSTITUTE

*Arcyria ferruginea*



*Arcyria obliquata*



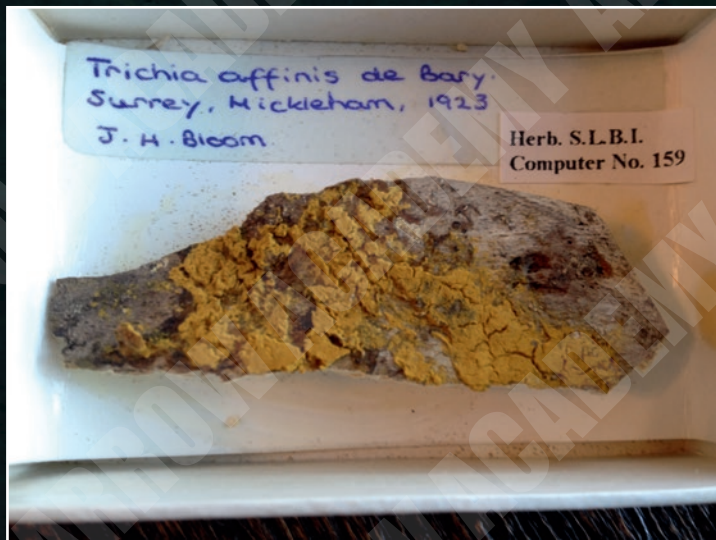
*Badhamia utricularis*



*Dictydiaethalium plumbeum*



*Trichia affinis*



*Diachea leucopodia*



*Diderma hemisphaericum*



*Diderma spumeroides*



*Leocarpus fragilis*



*Lycogala terrestre*



*Stemonitis fusca*



## about the transfer

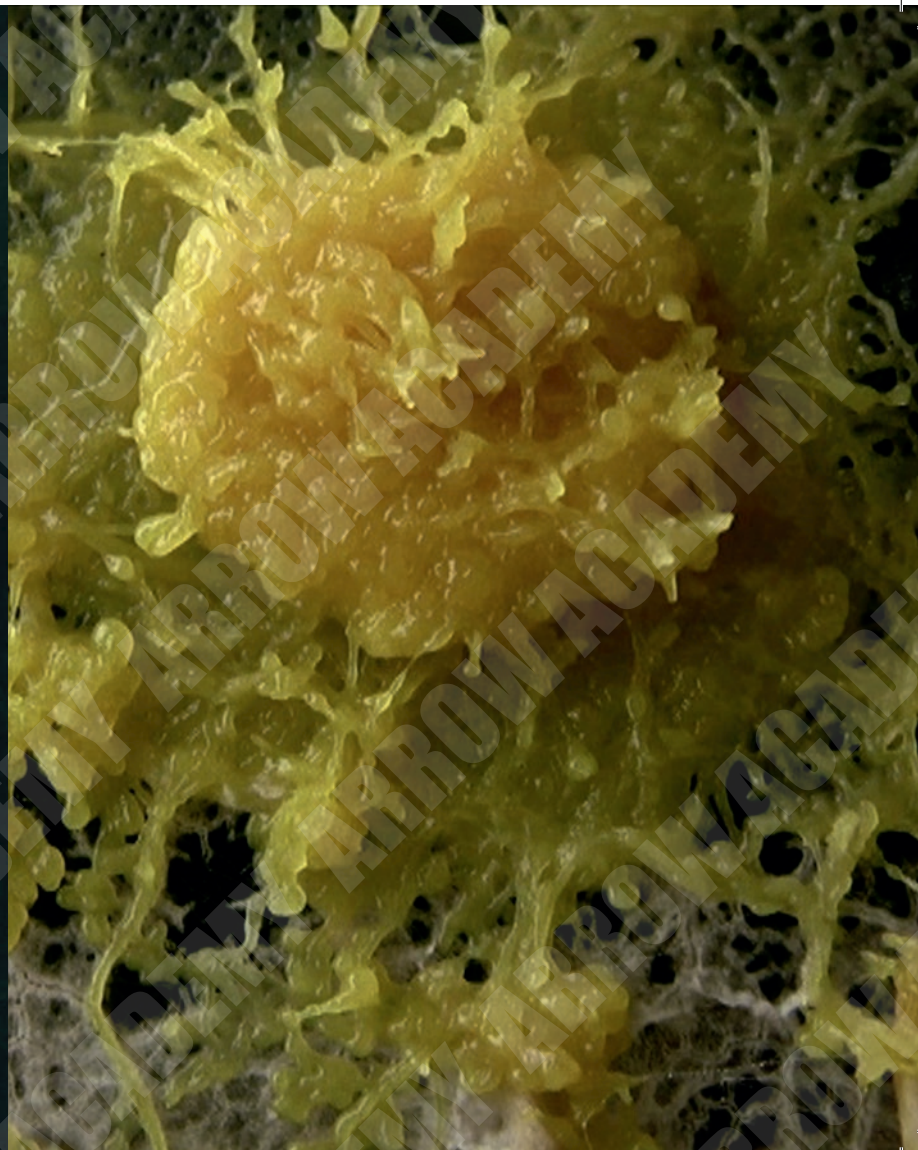
*The Creeping Garden* is presented in its original 2.35:1 aspect ratio with 2.0 stereo sound. The HD master was supplied by the filmmakers.

## Production Credits

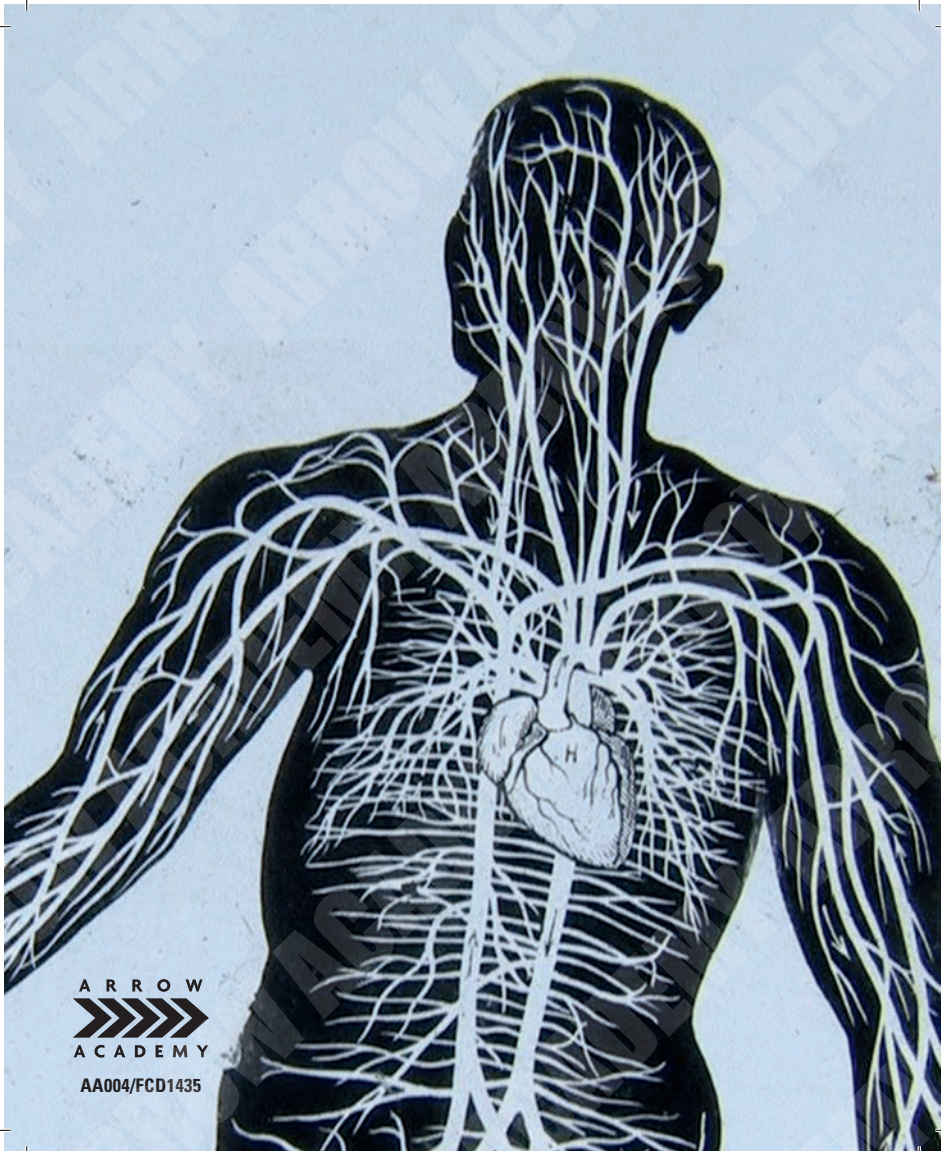
**Discs and Booklet Produced by** Anthony Nield  
**Executive Producers** Kevin Lambert, Francesco Simeoni  
**Production Assistant** Liane Cunje  
**Technical Producer** James White  
**QC Manager** Nora Mehenni  
**Authoring** Silver Sun  
**Subtitling** IBF  
**Design** Obviously Creative

## Special Thanks

Alex Agran, Tom Bell, Michael Brooke, Tim Grabham, Sigrid Larsen, Jasper Sharp,  
Nell Gatehouse (South London Botanical Institute)







ARROW  
  
ACADEMY

AA004/FCD1435