

JACQUES PERRIN

present

OFFICIAL SELECTION NOT IN COMPETITION
CANNES 96



microcosmos

A film by

Claude NURIDSANY and MARIE PERENNOU

A coproduction

GALATEE FILMS - FRANCE 2 CINEMA - BAC FILMS - DELTA IMAGES

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*I want to dream
about those other worlds,
immense and silent, full of violence
and beauty; the dark warm galleries
of termites, the endless nights of the moths...*

J.M.G. LE CLÉZIO, *L'inconnu sur terre*
ed. Gallimard

An hour and a quarter on an unknown planet : the Earth rediscovered on a centimeter scale. Its inhabitants : fantastic creatures, insects and other creatures of grass and water. Its countryside: impenetrable forest of tufts of grass, dew drops as large as balloons...

This is an exploration of a new world - a simple meadow - during a summer day : a daytime, nighttime and the dawning of a second day.

A single day equals a whole season in this micro-world. A whole period of life when, like insects, a life-span is measured in weeks.

Bathed in a strange light, surrounded by unknown sounds, the spectator discovers a parallel world governed by different physical laws : a country where animals walk on water, or stroll upside down. These adventures in this micro-world are punctuated by large scale shots (countryside views, aerial shots of clouds, storms...) or cosmic views (sun, moon and stars).

These journeys between two infinities make one aware of the relativity of each world.

This voyage of initiation is led from «within», by projecting the spectator into the heart of the action, as if he were the size of an insect.

BY WAY OF A SYNOPSIS...

The landing. Breathtaking dive from the clouds down to the meadow.

The grass jungle. First encounter with its strange inhabitants.

The first morning. Dew-drops, like enormous elastic balloons, visibly reabsorbed as the sun rises. The insects freshen up. A butterfly achieves its metamorphosis.

The bee and flowers. A bee gathers pollen from poppies. They are viewed as it sees them with its compound eyes. Then it flies to a sage flower, with its automatic pollen distribution.

The ladybird. The ladybird awakes. It devours a green fly, but is chased away by ant-shepherds defending their «cattle».

Snail-love. On a bed of moss, two snails are entwined.

The spider trap. Waiting in ambush on its web, the Argiope spider wraps its prey into a silken flow.

The warm hour. Midday; the heat of the day The humming is at its loudest. The flowers fade. The earth cracks. Under the burning sun, processions of caterpillars follow each other along the ground, searching for a place to bury themselves in order to become chrysalides. Ant gatherers take back seeds harvested in the nearby fields to their underground storehouses. On the dry earth, a sacred beetle rolls his ball of dung. An ant heap is attacked by a giant from the sky : a pheasant.

The pond. Acrobatic flights of large dragon-flies. Loving «girls» flying in tandems. Water spiders skidding over the liquid mirror. Under a veil of water, the Argyronet spider makes its underwater diving bell from bubbles of air stolen from the surface.

Thunderstorm. The insects suffer from the devastating effects of this liquid bombing..

After the storm. This is the time when the winged ants take off in nuptial flight, the future queens. Two big stag-beetles fight.

Night. Butterflies, bumble bees settle in their plant dormitories. This is the moment the night-insects awake, italian crickets, moths...

The second day. The mist vanishes. From the surface of the pond an aquatic nymph emerges... and changes into a mosquito. The day begins. Human noises surge all around, the dream of Microcosmos disappears.





CLAUDE NURIDSANY AND MARIE PÉRENNOU, FILM DIRECTORS.

Originally biologists Claude Nuridsany and Marie Pérennou have shared for over twenty years the same passion for living phenomena, thus claiming to be the heirs to two eminent predecessors unequally considered by posterity—Jean-Henri Fabre and Jean Rostand.

After graduating from the Paris Pierre et Marie Curie University at the beginning of the 1970s, although they were intended to embark on research work, they decided to turn towards a less traditional activity. Instead of going in for traditional scientific communication work they preferred to do publishing, to set up exhibitions, to write press articles and to make documentaries, which was more likely to convey the fruits of their observations and research work towards the general public.

Their speciality became that of tiny animals and more generally of all living creatures so tiny that only magnifying tools could make them visible and palpable.

Their aim was to unveil the secret world of often undreamt-of plants and animals.

As early as 1976 Hachette published the first collection of their photographs. Exhibitions, a large number of articles (*Géo*, *Terre Sauvage*, *Sciences et Avenir...*) and another five books followed.

In 1984 they made their first 16 mm documentary film for Channel One entitled «*Les habitants du miroir/The looking glass inhabitants*», a 26-minute long film.

But their concern remained to stay away from didactics and pedagogy (often constituent of documentaries) so as to approach the world of the infinitesimal—the «*planet below the planet*» as they put it— from a less systematically scientific angle that left more room for evocation, imagination and that displayed better the originality of this realm.

The meeting with Alain Jaubert—the director of the «*Palettes*» series, broadcast on Arte among other channels— then with actor-producer Jacques Perrin proved decisive.

The concept of «*Microcosmos*» gradually came into being, that of a film whose purpose, rather than being a «*super-documentary*», was to be a show per se.

How did you come up with the idea of Microcosmos and how did you think of the script?

«Things came somewhat naturally. We've been living for quite a few years in the Aveyron, which provides fertile ground for our research because it still has unexploited space and an appropriate climate. Our home has become a working place in which we do our research in the middle of nowhere. It's a very inconspicuous, ordinary place, there's nothing extraordinary about it, it's almost a backyard. It is some kind of virgin land that has kept much of its natural resources. It suggested us the idea of the unity of place: we'd thought that this small piece of land could be some kind of land where unexpected things could happen. And we've considered describing a beautiful summer day and telling what was going on there. Insects don't live long, at most a few weeks. To them one day is more intense than for us. The day we describe in Microcosmos is a sort of symbolic day, twenty-four hours treated as if it were a whole year in the life of a man with all the very intense moments affecting it.

You have chosen not to show it all and to make a selection among the insects and the tiny animals living in this space. Why?

«Indeed one can wonder: why them? Why ants, ladybirds, bees, spiders, gnats... why those rather than other ones? We gave this matter a lot of thought and we eventually chose to avoid as much as we could bloodshed, predation scenes—all highly violent moments. Insects are generally regarded as odd animals with strange habits; and we tend to focus on this aspect and always think that this world is deprived of moral values, that it's cruel and harsh... We decided to run counter to this approach in order to sort of rehabilitate insects and put them back into their right place. As any other species, they're living beings confronted everyday with the obstacles and the difficulties of destiny and in search of finding their place in the sun. This is why we wanted to show them as human beings, with their concerns, and the way they deal with their everyday lives.

People know at least a little more about the insects we have filmed. But we help people to discover insects from a different angle, in a new light.

In the cast there seems to be a certain number of totally unknown «actors»...

«Yes indeed. It particularly happened with the Argyronet spider. It's a very rare species. But its activity is so magical that you cannot overlook it. It's a spider living under water, building its house with air, a material which is immaterial as you well understand. In the film it is seen tearing off air bubbles one after the other from on the surface so as to make itself a bubble under water. It may sound quite paradoxical and yet our eyes allow us to see it. To see, if we may say so, something impossible!»

How did you do the casting of Microcosmos? What went on during the auditions and the screen tests?

«You need to understand that each insect has its own personality and its own temperament. Some people will easily play the natural part that is expected of them while others, especially if they are stressed, won't comply.

Let's take the example of ladybirds. We wished to film the taking off of one of them. We know perfectly well that a ladybird, if it is poised at the bottom of a blade, will naturally climb up to the top. When it reaches it, it'll take off because it doesn't feel anything under its legs: that is what is called the «point effect».

For this shot of just a few seconds we started by selecting some twenty creatures; then we put them to the test on location. First we found out that if we repeated several times the experiment only one out of three was willing to take off, one of which would do it systematically. At the end of the day we kept three of them and they were the ones whose flight we shot.

In many scenes we have used a large number of actors. Most of them were found on the spot, they were given full board, they were filmed and then released. But some of them had to be raised, particularly the caterpillars whose metamorphosis we wanted to show. For this we had somebody working full time, looking after the nursery.

How did you « direct » these actors who are naturally relatively undisciplined?

«Some shots took us up to forty takes, and even more, and it took days to do the focusing in the first place. It's very complicated because insects only behave in such and such a way if they're in a favorable environment. We need to have a great experience of each species. Let's take the example of the sacred beetle rolling up its pill of droppings: in this specific case, rather than wait till you come upon it, which would be rather uncertain given it is a very rare species, we have held one prisoner for a few weeks in its so-called «dressing room»— a luxurious terrarium!—providing it with the conditions to do what was expected of it, namely make its pellet. We provided it with the raw material which by chance was available, in this case, sheep fresh droppings. Then it was served this hot meal and we waited. In the end, one day it accepted to make its pill and to be carried on to the shooting location. Of course we had to be cautious so as not to scare it away. It worked and it was a small miracle, just like most of the scenes.

Anyhow we had a dozen other beetles at our disposal, sent from the south of Spain by a scientist. They came in by mail, in good shape and very healthy. They were provided with the best conditions possible, but none of them ever wanted to make a pellet.

The rule is to know how to wait and to know that the right time, if any, will always be transient. And this expectation often becomes obsessive...

You mentioned the Argyronet spider. It did not act «upon request» either?

«In the case of this spider, we knew that it makes its bubble—let's call it its diving bell—when it has just captured a prey and it has no «dining room» to swallow it. First step it must be given something to eat, for example a fresh water shrimp. Second step it must be given sea weeds, water plants with which it will be able to weave silk ropes to retain air bubbles. As soon as it has its prey, its plants, it is very likely to build a bubble. The thing is that it should make it at the right time and in the right place for the camera. We scrutinized our spider days and days and nothing happened. It was almost by chance, one evening before going to bed, that we realized, on paying it a visit that it had started to work. It lasted four minutes, and that was it! And then we were able to shoot.

But we could also mention the sequence in which ants milk gnats to collect the sweet liquid they produce.

We needed a colony of ants, of gnats and a very strong light considering how tiny they are and we had to be extremely cautious because ants are very fidgety. If we hadn't had all these years of observation of these phenomena, such circumstances, and of the sometimes very short moments when they take place, we would never have made it.

For all the sequences we made up a real schedule of the behaviour patterns so as to trace them at the right time. Still it took us three years of shooting...»

What is striking beyond some odd behaviour patterns is the humour emanating from some scenes...

«Humour, even when it is scattered here and there, is an important aspect of the film.

It's already the beginning of a form of complicity. We have stopped watching strange creatures, we're on the same level. Humour makes it possible to break distances.

We especially did not want the insects in the film to be case studies. Now in any scientific study what is shown is only what works perfectly.

If we take up the example of the sacred beetle you'll always be shown how it makes its pill and rolls it round. You'll never be told that it stumbles every other time when the ground is steep!

In *Microcosmos* we insisted on showing the small failures of life, the troubles, all the small problems that can happen to you. And it's well known that it's always fun to see that other people are in trouble.

You have filmed the insects at very close range, with few static shots but on the contrary with many camera motions. Many sequences allow the audience to penetrate in the privacy of the characters. How did you overcome the technical difficulties that such an approach created?

«We intended to be constantly level with the insects to show them in their environment as if our chin was dug in the ground!

We started with an existing camera that we had altered. One important fact was the optical system considering the problems of depth of field linked to the proximity. But we also needed a specific light and a system allowing the camera to move. We had to develop specific equipments for those very points.

We shot on location and in the studio. The studio is close to our house in the Aveyron. It's a kind of «field studio» which was built specifically for the film. We recreated, when need be, the required natural space.

Then we came up with a kind of hung cameras, hanging from the ceiling in one case and on track in the other case, allowing us to move in every possible way, without any jolts, in a very smooth way. These cameras were remote controlled by a set of engines, including in their most complex moves, somewhat as a cameraman working with his camera on his shoulder. We needed a very flexible equipment.»

The music score—and sounds in general— play an important part in *Microcosmos*.

«We have worked on the sound of the film a great deal, by collecting a large range of sounds on location: stridulations, hummings, etc. Others were too inaudible to be captured on location, so they had to be recorded in a soundproof studio, such as the flight of mosquitoes and flies. We also resorted to some sound effects directly inspired by real sound, primarily because of technical limitations: there are sometimes cases when the real sound, if it's recorded at too close range, clashes with the image.

We have made every effort to reach credibility and truthfulness to avoid a sensation of hypertrophy which are sometimes created by some sound «close-ups».

The score was composed by Bruno Coulais. An unprecedented case to our knowledge, he worked closely with sound editor Laurent Quagilo, so as to make a sound material both harmonious and coherent. The score is crucial in *Microcosmos*.

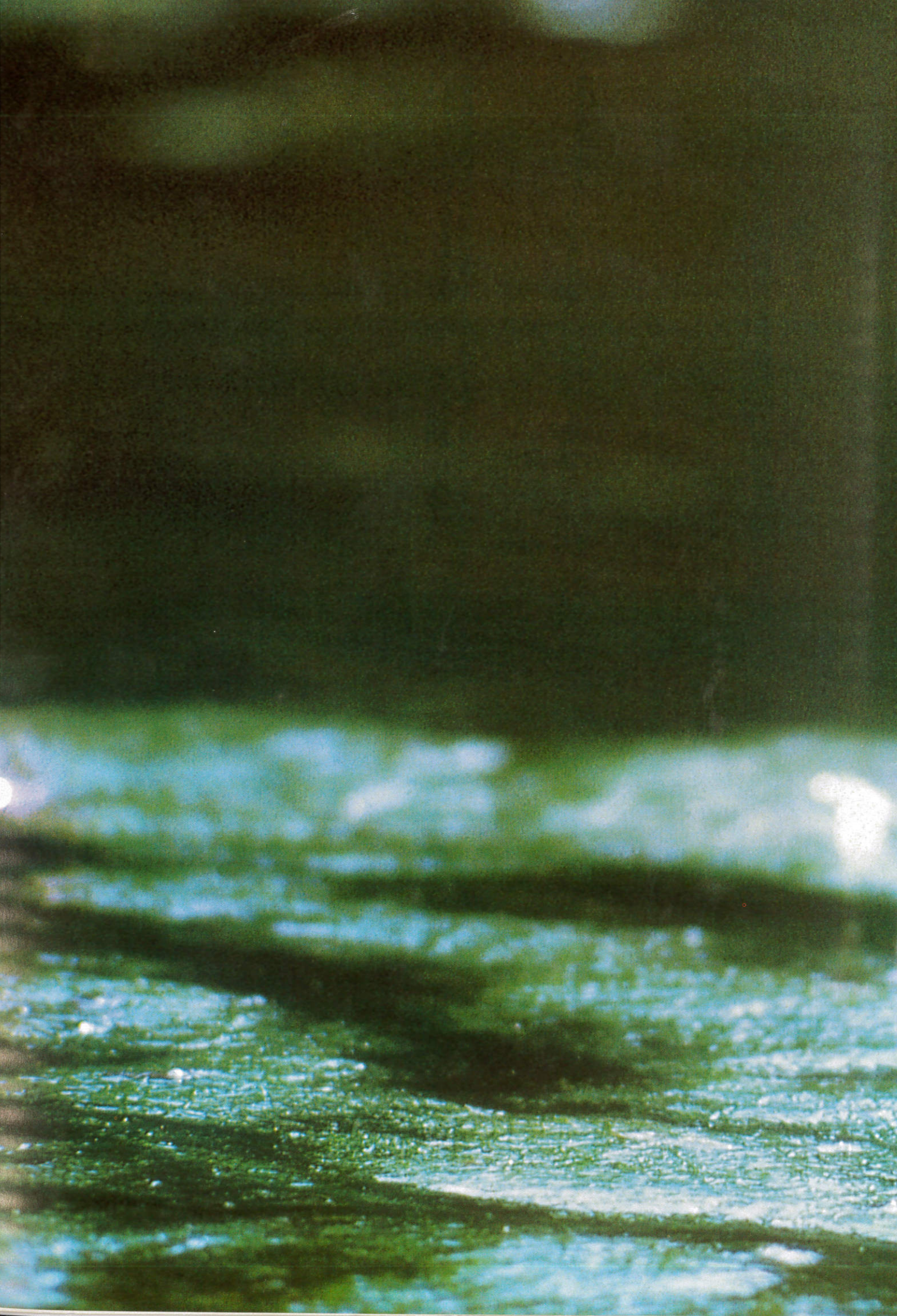


It's a kind of fabric running through the film from beginning to the end.
It sustains the feelings, it's a perfume suffusing the story, which accompanies this «natural tale» with its references to childhood, its wonders, its discoveries, and its fears aswell...»

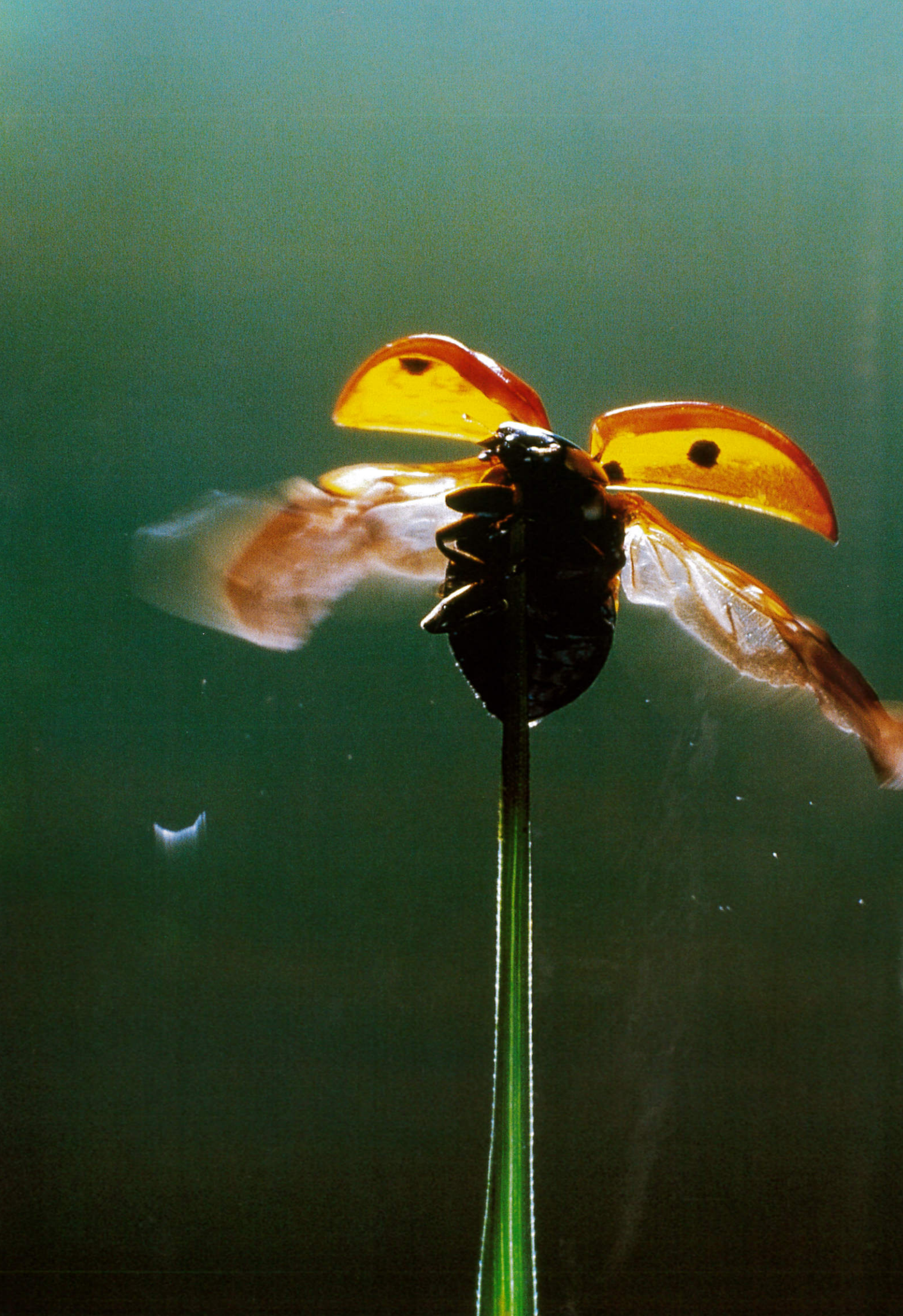
Microcosmos in a few figures

15 years of research, dozens of «observation diaries»
2 years of designing the equipments (cameras, lights...)
3 years of shooting
6 months of editing
80 kilometers of reel (40 times as much as the film)....









WITH, IN ORDER OF THEIR APPEARANCE ON THE SCREEN :

Ladybird with seven spots

Swallow-tail butterfly

Climbing caterpillar

Bee gathering pollen from the sage flower

Long-tailed blue caterpillar

Burgundy snails

New-born caterpillar of the Jason butterfly

Argiope Spider

Bombyl (gathering fly)

Processionary caterpillars

Red ants

Gathering ants

Polist wasps

Sacred beetle

Pheasant

Water spiders

Notonects

Argyronet Spider (with its diving bell)

Young Agrion dragon-flies

Eucera bee in love with the Ophrys orchid

Drosera carnivorous plant

Rhinoceros beetle

Iule

Stag beetles

Bucephal caterpillars

Diablotin

Great peacock moth

Cousin mosquito and its metamorphosis

CREW

| | |
|---------------------------|--|
| <i>Direction</i> | Claude NURIDSANY Marie PERENNOU |
| <i>Camera</i> | Claude NURIDSANY Marie PERENNOU Hughes RYFFEL Thierry MACHADO |
| <i>Editor</i> | Marie-Joséphine YOYOTTE Florence RICARD |
| <i>Sound</i> | Philippe BARBEAU Bernard LEROUX |
| <i>Original music</i> | Bruno COULAIS |
| <i>Sound creation</i> | Laurent QUAGLIO |
| <i>Executive producer</i> | Michel FAURE Philippe GAUTIER André LAZARE Patrick LANCELOT |
| <i>Producer</i> | GALATEE FILMS Jacques PERRIN Christophe BARRATIER Yvette MALLET |





THE WRITER - DIRECTORS

Claude NURIDSANY and Marie PERENNOU

Born in Paris.

Lecturers in biology at the Pierre and Marie Curie University in Paris. Classes for post-graduate students in Ecology and Reproductive Biology.

They have been working as a team since 1969, the year they left their university careers to work independently on the study of living phenomena.

Since then, they have developed special techniques for scientific films in order to reveal, through text and image, nature in all its forms. They aim to reconcile science and poetry, aesthetic research and scientific information.

In 1976, they were awarded the Prix Niepce for their photographic work which has appeared in numerous exhibitions.

Their work has resulted in a certain journalistic activity.

TELEVISION

“VOIR” magazine (Antenne 2, 1978)

“CLEFS POUR DEMAIN” N° 3

“LES MYSTERES DU MONDE VEGETAL” (1980)

“ET L'INSECTE DANS LA CLASSE”

“LA PLANETE DES INSECTES” (26 minutes, 1984)

“LES HABITANTS DU MIROIR” (26 minutes, 1986)

“LE JEU DE L'INSECTE ET DE LA FLEUR” (26 minutes, 1987)

“VOYAGE AU PAYS DE L'INVISIBLE” (26 minutes, 1987)

BOOKS

Text and photographs:

“PHOTOGRAPHER LA NATURE”

(Hachette, 1975)

Silver medal - *The World's Most Beautiful Books*

(Leipzig, 1975)

“VOIR L'INVISIBLE”

(Hachette, 1978)

Selected as one of the most beautiful books of the year

“INSECTE”

(Editions La Noria, 1980)

International Grand Prize - Books for Young People

(Bologna, 1981)

“LA PLANETE DES INSECTES”

(Arthaud, 1983) Prix François Sommer 1985

“ELOGE DE L'HERBE”

(Editions Adam Biro, 1988)

Nominated for the Art Book May Prize

“MASQUES ET SIMULACRES”

(Editions Du May, 1990)

«MICROCOSMOS»

(Editions de la Martinière - October 1996)



THE PRODUCER

Jacques PERRIN

- 1968 *Z* Costa Gavras
Oscar for Best Foreign Language Film
Oscar for Best Editing
- 1970 *Blanche* Walerian Borowczyk
- 1972 *La Guerre d'Algérie* Yves Courrière and Philippe Monnier
- 1973 *Etat de siège* Costa Gavras
Grand Prix du Cinéma Français
- 1974 *La Spirale* Jacqueline Meppiel Valérie Mayoux and Armand Mattelard
with the collaboration of Chris Marker and Régis Debray
- 1975 *Section spéciale* Costa Gavras
Prix Louis Delluc
Best Director - Cannes 1975
- 1976 *La Victoire en Chantant* Jean-Jacques Annaud
Oscar for Best Foreign Language Film
- 1977 *Le Désert des Tartares* Valério Zurlini
Grand Prix du Cinéma Français
Prix Donatello
- 1978 *L'Adoption* Marc Grunebaum
- 1981 *Les 40èmes Rugissants* Christian de Chalonge
- 1987/88 *Médecins des hommes*
Biafra Le pays du soleil levant Laurent Heynemann
Lebanon Le pays du miel et de l'encens Maroun Bagdadi
Afghanistan Le pays interdit Alain Corneau
Burma Le pays sans péché Yves Boisset
Salvador Le pays des quatorze volcans Florestano Vancini
China Sea Le pays pour mémoire Jacques Perrin
- 1984/88 *The Monkey Folk* Gérard Vienne
Documentary film on different species on monkey - Cannes 1989
- 1984/89 *From Monkey to Apes* Gérard Vienne and Jean-Yves Collet
TV series on different species of monkey
- 1990 *Hors la Vie* Maroun Bagdadi
Special Prize - Cannes 1991
- 1991-96 *La 25ème Heure*
Production, with Jean Rozat, of a weekly programme on France 2 television.
- 1992 *Guelwaar* Ousmane Sembene
Oh pardon! Tu dormais? (TV) Jane Birkin
- 1993 *Eritrea* (doc.) Didier Martiny
Esperance Jacques Perrin
- 1994 *Missus* (TV) Alberto Negrin
- 1995 *Children of Lumière - 100 years of french cinema*
a movie made with the highlights of the french cinema
Les Agneaux (the Lambs) Marcel Schüpbach
- 1992-96 *MICROCOSMOS* Claude Nuridsany and Marie Perennou



