Journal of Geography in Higher Education, Vol. 8, No. 2, 1984

Exploring the Living Planet with David Attenborough

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Introduction

As regular readers of *JGHE* will know, the journal has a strong interest in the use of film as an educational resource. Over the years through our association with the British Universities Film and Video Council, we have discussed a wide range of films which have value for geography courses, both in the Resources section of the Journal and also in mainline articles. We have not so far had an opportunity to talk to any film-makers about their films, nor have we been able to consider in any detail, films which have been made for a wide popular audience rather than for a specialised education market. We were delighted therefore, when David Attenborough—the celebrated natural history film maker and writer—agreed to be interviewed about the making of his highly successful television series, *The Living Planet,* and its accompanying book. The series was just shown on British Television in 1984, and television rights have been extensively sold abroad with its American showing on the PBS network in early 1985. In the U.K. it averaged over ten million viewers for each 'episode' and as much of its content is geographic represents a significant example of popular geographic education.

The Living Planet, subtitled 'a portrait of the earth', is devoted to the exposition of the world's ecosytems. In a series of 12 programmes, television viewers are taken through the infinite variety of species adaptations to contrasting physical environments, from the heights of the Himalayan mountains to the depths of the Pacific ocean, from the sterile aridity of the deserts to the lushness of the tropical rain forests. In the course of their journey, viewers are introduced to the landscapes of the world and some of the physical forces which have created them. They are also presented with a picture of the natural world which is being continually transformed through the activities of human beings.

The interview ranged over a number of issues associated with the series, and its precursor, *Life on Earth.* We focused first on the conception, organisation and production demands of the series, which took three and a half years to make. We were particularly interested in Attenborough's intentions as a film maker and writer and the extent to which those intentions were actually realised in the end product.

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The second main area for discussion concerned the issue of creating scientific programmes for a wide audience and the potential conflicts that may generate. Finally, we discussed at some length David Attenborough's views on environmental and wildlife conservation and the extent to which a television series might be able to contribute to the process of raising awareness about the need to manage the world's resources rather better than we have so far.

Biographical notes together with details of the availability of the films are given after the transcript of the interview.

(DU) Could we begin by asking you about the genesis of the series. Where did the idea come from and what were the mechanics of the production?

(DA) Well, *The Living Planet* was a sequel to *Life on Earth,* and that series can trace its ancestry back to a series called *Civilisation,* the first of these big thirteen-part non-fiction series. That first series was made as one of the first colour programmes to be shown in this country—on BBC2. Once it became clear that *Civilisation* was a success—and it was a sensational one—then it was clear that many other subjects could be treated in a similar way. The audience obviously welcomed the idea of being presented with a major subject treated in a serious way and being told, in effect, that if they stayed with the series from beginning to end they would be given a thorough survey of a serious and important subject. Several series followed *Civilisation,* for example *The Ascent of Man* in which Jacob Brownowski surveyed the history of science, Alistair Cooke's *America.* But it was clear to anybody with half an eye that natural history was a perfect—possibly even

the most suitable of all—subjects for this treatment. At that time, I was an administrator and I was in no position to tackle it myself. Happily, no one else did before I resigned and went back to programme work. I was then able to suggest that I did it myself. The Natural History Unit of the BBC, based in Bristol, had the same idea at the same time—a series like that is quite a plum for any department, for it brings with it a substantial budget and production effort. So to that extent, it was a mutual idea—the Unit and I got together.

I believe that a narrative element is a great asset to any programme. It carries people from one sequence to another. So when I thought about a series on natural history, I immediately plumped for evolution as the basic narrative thread. I knew it would give us a gripping and powerful story. Its only disadvantage was that it started slowly and unspectacularly. After all, protozoans and algae are not obviously photogenic and attractive. As an American television man said to me when I was trying to interest him in the idea 'How are you gonna grip them by the throat in the first programme if its all about green slime?' Happily, we managed to do so! When *Life on Earth* turned out to be a success, the question arose as to what we should do next. A series that dealt, not with taxonomic groups like *Life on Earth* but with environments, one by one, was an obvious answer.

The process of making it starts—in this instance, at any rate—with me sitting down and writing a script—in fact, 12 scripts. I write each in very, very precise detail, not only precise species of animals, but precise turns of phrase in the narration and precise camera moves. It comes to about 30 pages of type. I don't do this because I propose to stick to that detail but because you have to have a basis that you know will work, before you start departing from it or embroidering it.

You may ask, why 12 in the series? Well, 12 or 13 is a convenient number from a programme planner's point of view because it is a quarter of a year. This is not as silly or as arbitrary as it may sound. There *are* seasonal differences in viewing habits, and there *is* a need to change the overall programme pattern as the year progresses. If series are all of different lengths, then you will get odd instalments left over when the overall schedule pattern changes, and if you put the remainder of a series on different days at different times, then you will lose much of the audience you have carefully built up in the first part of the series—and viewers are infuriated. So six, 12 or 13, and 26 are standard lengths for series. And of those, 12 it seems to me gives you enough space to develop a theme seriously, and is a reasonable number that you can ask people to watch with continuous attention without missing too many instalments.

So if you decide there are to be 12 programmes in the series, each about a different environment, then six or eight automatically suggest themselves—jungles, deserts, grasslands, the seas and so on. The last few you can argue over. I wanted to do one on caves. The producer of the series, Richard Brock wanted to do one on shores. There wasn't room for both—and he won.

Having agreed on 12 titles, three directors were each given four of them. As I wrote each script, it went off to the director. He then put a researcher on to it who, in most instances, was a biologist and who knew, or had discovered what research was going on in certain subjects. He then got in touch with researchers, sent the scripts to them for comment. If, for example, I had written something about *Drosophila* in Hawaii, then he sent it to people in the University there and they might write back and say either that I had got it wrong, or that I had used a hackneyed example and suggested a different, perhaps unpublished and more

dramatic one—or say that it was okay. And then, as a result of these discussions, and the director's and researcher's own ideas, I would sit down and modify the script.

(JB) What is the relationship between the scripts, the films and the book? How do these three go together?

(DA) Well, they both stem from the same body of research—if you can dignify it by that name. However long you might wish to spend on researching a subject you have to work to a schedule. You can't allow work on a series like this to go on for more than about three years without getting something on the screen. The investment is huge; people run out of steam; you risk getting out of date. So you just have to get a move-on. Absurd though it may sound, I had to complete all the initial scripts within six months. That may sound quite a long time, but it actually works out at two weeks a programme—and that is working non-stop. That means that I spent one week reading around a subject and thinking about how to treat it; and a week actually writing it. Then I had to start on the next one. But we are not talking about very advanced stuff—with the possible exception of plate tectonics. If you are doing a programme about deserts, you don't have to be a genius to decide that the problems of living there are that it is very hot and there is not much water. Nonetheless, those are important concepts and if you apply them to plants and reptiles and mammals and insects, you find that there are a whole lot of interesting solutions. Your difficulties in writing the scripts are not primarily scientific ones, but ones of narrative, of style. If you whisk the viewer round the world too quickly, you are just going to confuse him. Yet at the same time you have promised that the series will be reasonably comprehensive, so you have to cover the major areas of an environment. You also want to maintain a narrative thread not only within the programme but from one programme to another. So it is these elements, not scientific ones, that cause you most problems. *The Living Planet* did not have such an obvious story as there was in *Life on Earth.* Nonetheless, there *is* narrative continuity and it was one that we spent a long time on. I maintained that story-line as far as I could in the book—which I didn't start to write until we had finished about two-thirds of the filming and I had actually visited most of the locations with which I was unfamiliar.

(DU) One of the things that strikes me reading the book is that it's much longer on explanation—on science—than the film. Do you think this reflects a fundamental difference between the two media?

(DA) Clearly, it does. If you tried to translate the images of the film into words, you would end up with an impossible number of adjectives. Equally, the film spends less time on enunciating underlying principles and much more in showing actual examples. In fact, though I suspect that if you looked at the narration of the films you would be surprised to discover how much explanation of principle it does contain. As we all know, the visual image is much more powerful than the spoken word. If there is a picture of a bird of paradise displaying and someone, at the same time is trying to tell you about the general principle of secondary sexual characteristics of birds, I know what you are going to remember. You are going to remember the shimmer of those gorgeous plumes and not the abstract biological principle.

(DU) Do you envisage different audiences for the book and the films?

(DA) No. This business of envisaging the audience I find difficult to put much faith in. Speaking as an ex-Controller of Programmes, if a producer said to me "I'm making this programme for a fishmonger in Southend or a coalminer in Northumberland"—and if he has never been either—then I would suspect his programme judgement. He has no real idea of what a Southend fishmonger feels. My own particular practice is to try and write or film in the way that I know would interest me and hold my attention if I knew nothing about the subject. And that's all.

(JB) Is that why your narrative is direct, for I am very struck by the way in which you address the reader and the viewer directly?

(DA) That's a by-product really—a historical accident that proved to work in television and that has got carried over into the book. When I started making natural history programmes 30 years ago, the amount of film we could use was tiny—and often non-existant. Television then was only watched by a very small number of people and we had very little money indeed. What we did have was hardware—two television studios at Alexandra Palace with four cameras in each. That's what we had to make our programmes with. Every now and then, when we were feeling bold, we went to management and said 'Please sir, can I have a little money to buy a little film' And if you were lucky, you might get enough for a minute or two. So when I went to West Africa in 1954 on a joint expedition with the London Zoo at least half of the programmes we were making would have to be occupied with showing the animals that we collected, live in the studio. The rest of the time was taken up by short film sequences showing how the animals we showed were caught, and a certain amount of film of animals that we couldn't catch—such as termites. Programmes like that, of course, required a presenter—a character in the studio who would do the talking. And eventually that character in later series began to appear in the film as well, to make the continuity between film and studio better. It turned out that people liked this style. They liked knowing who it was who was telling the story and they were able to identify with him as he travelled around foreign parts.

(DU) Does The Living Planet *realise your original concept particularly well and equally over the entire series? You have already hinted, I think, that you were less satisfied with some of the programmes than others.*

(DA) Oh, inevitably. I think probably, that I got more satisfaction personally from writing *Life on Earth* than I did from *The Living Planet* because I learnt more. Because *Life on Earth* had a continuous story that I had to follow, I found myself going into subjects that until then, for one reason or another, I had skipped. I discovered things about early insectivores, for example, and the evolution of the ungulates. I don't mean that they were things that nobody else knew, but propositions that I hadn't thought about before and which suddenly made exciting evolutionary sense. There were other discoveries too. We had, after all, some 20 cameramen working at various times on the series over the three years. For example, we had decided that we wanted to have a montage of spectacular frogs somewhere in the amphibian programme, so we said to them—if at any time in your travels doing other things, you come across an odd frog, do please film it. Over the years, these sequences began to mount up in the cutting room until one day, the editor said, "I've just joined up all that frog material. Would you like to have a look at it?" There was something like three hours of it—and it was amazing. There were frogs that we never knew existed, doing things we had never suspected. That was a revelation.

(JB) Production demands have obviously changed from the early days of programmes like Zoo Quest. The Living Planet *seems to have had a massive budget and you could have chosen absolutely anywhere to do what you wanted. Were there any production demands that you had to meet in terms of selecting environments?*

(DA) No. not really. We did have a large budget, that is quite true, but in fact it was no bigger than the average domestic soap opera. I suspect our programmes looked more expensive than, in fact, they were. Because they were all written in detail before we started shooting, we were able to plan our shooting very economically. It makes a programme look pretty lush if it can afford to go the Antarctic for just a couple of minutes. And if that was the only reason we had gone there, then of course the costs would have been enormous. But we knew that another programme needed a sequence in the Nothofagus forests of Tierra del Fuego, another a sequence with llamas in Peru, and another a bit about the pampas. So we were able to put together a South American—Antarctic trip that was, as it were, amortised over six or seven programmes. That makes it economically possible.

Of course, it is true that costs have gone up enormously over the years—but so have standards. Thirty years ago, it was just a cameraman and me and we simply pushed off to Borneo, for example, and disappeared for four months. We can't do that any more. Now there is a team of four or five—not many by the standards of say, drama programmes, but quite a team all the same—with piles and piles of very sophisticated equipment.

(JB) But there must be problems in terms of actually getting your animals to perform on cue. One of the things that interests me in filming natural history is how you get your snake to fly at the time you want it to. The crew is sitting there, costing thousands of pounds per day. Do you take the animals with you or do you wait for the event to happen?

(DA) No—you don't actually do *that.* But, of course you have to *arrange* things —and that seems to me to be perfectly legitimate in certain contexts. There are, after all, two quite different types of natural history programme. There is the one, which I used to make a great deal of in the past, where you saw the young Englishman in his shorts trotting off to explore some far-flung piece of territory. That is, to some extent, a real-life adventure story. If it depends upon the suspense—what will we find behind the next tree?—and in fact what you show purports to be a wild creature that lived there but is a half-tame animal that has just been released from a box, then that is a fraud. But if you are making, not an account of your travels, but a serious exposition about, let us say, gliding reptiles, then it seems to me perfectly acceptable that one should catch one and release it under controlled circumstances so that the camera is ready and in the right position. That seems to me perfectly acceptable. It is certainly the only way you are going to get shots of flying snakes.

In *Life on Earth* we had a sequence about bats. You saw fruit bats detaching themselves from the branches in their roost. Then a good closeup shot of a bat from below, with the sun shining through its wings so that you could see the bone structure. Then suddenly, there was another shot in which you appeared to be travelling alongside and just above the bat, so that you could see exactly how the wing muscles and the elastic membrane worked. Afterwards, lots of people asked how on earth we got that last shot, their eyes shining with the wonder and beauty of it all. So I would explain that bat flight is being studied by an American

University and they have a small colony of fruit bats living in a wind tunnel. Every morning, the fan is switched on, a great gale roars down the wind tunnel and the bats start flying, matching their speed to that of the wind so that they remain in the same place in relation to the wind tunnel—and you can film them through an observation window. And then,—I'm sorry to say—people appear to be very disappointed. Even so, I think that kind of filming is totally acceptable in this kind of film.

(DU) Do you make much use of the consultants from the academic world?

(DA) Yes, certainly—on particular specialised points. The academic level of the programmes as a whole is not very high. If I am not sufficiently knowledgable to know the basic principles of desert ecology, then I shouldn't be doing the programmes in the first place. But I am not necessarily expert on, let's say, the locomotion of sidewinder rattlesnakes—and then one seeks advice from a consultant. Such experts are probably of the greatest value in simply finding the animals in the first place. These days, when ethological research is being sponsored by universities all over the world, you stand a pretty good chance of finding a researcher somewhere who is actually studying the animal you are interested in, in the field. So you go to him and say—we would like to see the aggressive display of the alpha male in your monkey troop, and he will reply—"Fine, you want to see Fred. He usually does his stuff at half past four on a tree by the river." He takes you down there, and sure enough Fred does his stuff on schedule. People like that have spent years and years of patient observations getting such knowledge and you might think that they would say "Why the hell should I give this invaluable information that has cost me so much in blood, sweat and tears, to some itinerant film maker from the telly?" In fact, no one, ever, has said that. Not one. They are all absolutely delighted that anyone should be interested in their favourite animal and should want to give it some public exposure. People have been amazingly generous every time.

(DU) One of the points that I think comes over quite strongly from an ecosystem point of view is your concentration on the fauna. Would it be true to say that the flora get less of the action? And the landscape, the physical and chemical processes that are also a part of that system, even less time? Is this because of the medium in which you are working?

(DA) No, not really. I set out to make a series about biological adaptations. That is what the series was about. Of course, you might well ask—why did you pick adaptation rather than geomorphology and the answer is that it is easier to make a programme about adaptations—and that, anyway, is what I am interested in.

(DU) You say it would be intrinsically more difficult to make a programme on geomorphology.

(DA) Yes. Rocks don't normally move at the kind of speed that holds people's interest; and people don't identify with rocks in the way that they do with animals. People are basically interested in living things—it demands more from the imagination to become wrapped up in geomorphological processes or sub-atomic physics.

(DU) I think that comes over quite strongly from the programmes that have been done, which tend, for example, to cover the weather. I suppose some very high budget films have been attempted. But they have been, I think, less of a popular success than your series.

(DA) I don't know that there have been many high budget films on such relatively unpopular subjects. It is a chicken and egg situation, really. A network controller will happily put on a programme at peak hours if he thinks it is going to attract a lot of people—and therefore he feels able to give it a reasonable budget. But if I were to say "I'd like to make this programme about fog", he'd probably say first "Do you have to?"; then "Do you think that it is an educational responsibility that we should do so?" And if you convince him on those points then he will probably say, "Very well, we'll put it out at a quarter past eight on a Sunday morning—and here is £350 to do it with!" So I am not too sure that there *have* been all that number of high-budget programmes on meteorology going out at peak times. Actually, I would like very much to do a programme on palaeontology. It is a subject which is close to my heart and I think I could make one that *would* merit a place in peak hours. But it is very much easier, I am quite sure, to make films about living animals.

(JB) May we discuss another geographical issue—the concept of place and places. It seems to me that the films which worked best were those very clearly located. I'm thinking for example of the islands programme where you were on Aldabra for a long time. The viewer had a very strong sense of Aldabra as a special, unique place. To what extent were you consciously trying to find identifiable places?

(DA) Well, no. In fact, if anything, quite the reverse. It seems to me—and I don't want to make too high a claim—that *Life on Earth* and *The Living planet* were a new kind of programme for British television. Until then, nearly all our natural history programmes could be put in one of two categories. Either they were a species study—Here is this little animal: it's spring; its producing its babies; now the winter is coming, now nature takes its toll; but next year, etc. etc." Or else it was the study of a particular area "Here is the extraordinary community of animals and plants; everything depends on everything else; it is all more complex than we had ever supposed; and now man has come, in his ignorance and is ruining it all." What *The Living Planet* and *Life on Earth* tried to do was neither of these things. They tried to take a phylum or an ecosystem and to show the different versions it could assume *world-wide.* So it was part of the basic idea that the programme on deserts should show not just the Sahara but the Namib and the Atacama and the Mojave. In fact I felt we had not properly fulfilled our responsibilities by not showing the Australian desert as well. Our theme was convergent evolution and the processes of adaptation, and you illustrate that most vividly by showing how a particular set of physical conditions produce similar responses from very different organisms in different parts of the world. Of course there are dangers in skipping about too much. Sometimes we got over them by simply not saying where various examples came from. We just said "Here are 27 different kinds of coral fish which show the wide variety of ways in which patterns can be displayed on a similar-shaped body." We didn't say each time "This is from the Pacific and this from the Indian Ocean," because that was not the point. When we did make the transition from one part of the world to another, we had to do it with considerable care if we were not to baffle people. There had to be a good reason for doing so; and you couldn't do it too often. In fact, I think we spent more time worrying about this than we did on points of scientific exposition—in which I suppose we were a little more confident that we knew the answers.

(JB) Certainly I was struck by the existence of organising themes within the

programmes. Thinking, for instance, of the jungle programme—it was quite clear that you were taking the layers of the rain forest and height was the theme. But it then seemed to break down after about 15 minutes or so. We then went and looked at animals in different parts of the jungle and only came back to height at the end. The themes were a lot clearer in some programmes than in others.

(DA) Well, you may be right. But if it seemed that way to you, then we failed. In fact, every one of those animals was in its right tier and the movement was made from one tier to another by returning to the narrator on the rope and watching him make the move. We did, it is true, move from canopy in South America to canopy in Africa—but that was part of the attempt to give a global picture that I was talking about earlier. Some programmes were very difficult indeed to do. The oceans, for example. How do you deal with all the oceans of the world in 55 minutes? But it had to be done. If you are going to do a comprehensive series, then it must be comprehensive. You can't just ignore the oceans, just because you think they are going to be difficult.

(DU) You must have had similar problems with the programme on the sky?

(DA) Well, we treated it in the reverse of the way we treated jungles. We started from the ground level and moved all the way up. It had its problems, not least because we were jumping from discipline to discipline, from entomology at the bottom to astronomy—or at least meteorology—at the top. Nonetheless, I hope people followed it and knew where they had got to and where they were going. That programme was an example of what I was saying earlier on about narrative thread. It was a kind of journey, not an aimless wandering.

(DU) One of the things the programme does is concentrate on what, for most people will be very very unfamiliar environments. The photographs in the book, for example, are of exotic species. Is this for graphic effect or is this because that's a better way of illustrating the series? You had very little from the British Isles, for example.

(DA) Well, that is not quite true. Half the last programme was about the British Isles; and it was so because the British Isles is a classic example of the exploitation of the environment by *Homo sapiens*—which was the subject of the last programme. It is no good saying, I'm going to do a programme about jungles but because we must keep a high domestic content, I'm going to make it in Dorking! Let's take the northern forests. I actually began by thinking of placing it in Scotland to start with. But the fact is, we have wrecked most of our coniferous forest. You have to look very hard indeed to find a crossbill. Where can you find a really good rich flourishing forest of Caledonian pine? The bits we have left are no more than relics, compared with the pine forests of North America. So okay, that's that. Grasslands; where are you going to find good ancient grasslands in this country? We haven't got any. It isn't necessarily that I have a passion for the exotic (though I dare say that I have), but simply a matter of selecting the best examples. The fact is that this blessed plot—as the Bard said—is not representative of the world at large.

(JB) Another aspect of exotic was the need for drama within the programmes, the 'need' for some kind of dramatic circumstances. I am thinking about the northern forests programme with its encounter between the owls and voles. You sat there at the edge of your seat wondering what was going to happen! Could you tell us something about the need for drama within the films?

(DA) Dramatic sub-plots, like Shakespearean comic scenes, need to be handled with great care. You have to make sure that they don't take over, so that the audience loses sight of the main story. On the other hand, it is quite nice to have a little encounter. Black widow spiders do attack scorpions in the desert. Of course, you can over-do such little dramas and you can invent bad ones—one's that don't really tell you anything and which are just there for a bit of vicarious thrill.

(DU) Do you think you tone that down too much? You often show insects eating other insects, but you seldom show more gory encounters.

(DA) Really? That's not what viewers think, I don't mind telling you! They say, on the contrary, that I have gone beserk and I am a sadist and so on. We show some fairly powerful stuff of lions eating wildebeast and *Homo sapiens* spearing white-eared cob.

(DU) Could we turn to the issue of presenting science to the populus at large. I, for my sins, once did a course in palaeontology and when I saw Life on Earth *I turned to my wife and said "My God, why didn't they show me this instead of boring me with those rotten old trilobites". And that was, I think, very effective in that sense. What do you regard as the benefit of popularising science? What is at the back of your mind when you are making the series?*

(DA) Pleasure. Only Pleasure. It seems to me that science, fundamentally, is concerned with defining man's relationship with the natural world—making sense of it. And when it does that, it brings great pleasure.

(DU) How important therefore do you think it is to get it scientifically right?

(DA) I think it is essential. We have a great obligation to make it as right as we possibly can. If someone shows us that we have been inaccurate in the programme we will go to a lot of trouble to put it right before the programme is repeated—even though it may cost quite a lot of money. For example, in the programme on rivers I said that catfish are all bottom-living creatures and someone wrote to us to say that this was not so. As I read it, I knew he was right. After all, I used to keep upside-down catfish, which hang about close to the surface, when I was a lad in my aquarium. I couldn't imagine how I had made such a silly statement. So we re-recorded the commentary to say "nearly all catfish are bottom-livers".

(DU) Do you use the consultants to come back at you in this sense, to check the final product?

(DA) Yes, we do that as well.

(JB) But do you then get tensions between the amount of qualification that consultants would wish to make to your 'generalisations'?

(DA) I can't recall an occasion when, after we had changed something in the light of the criticism from a consultant, that he then said "Well even now, it's wrong". I would certainly forego a dramatic effect in favour of being correct.

(DU) I think that leads us to the debate about showing animals from an anthropomorphic viewpoint. One senses quite strongly when you look at the programmes that you obviously try hard not to do this, but your musical score often does seem to anthropomophise the animals.

(DA) In what sense is music anthropomorphic?

(JB) In the sense that the animal seems to be performing to the music. One example

would be where the cock-of-the-rock birds of paradise were performing their courtship dance and your commentary said something like "the performers are getting ready and they have all laid out their stages ready for the dance".

(DA) Well, I certainly think one should avoid anthropomorphism. But the statement that the cock-of-the-rock has a dancing stage is factually correct. A stage is something on which a creature performs, animal or human; and a dance is an accurate description of what the bird does—different from walking, running or flying. Of course, I know what you are talking about when it comes to the music. By using music, you can make an animal appear to be funny when it is not. To laugh at it, as a consequence, is to misunderstand it. And we are not in the business of trying to promote misunderstanding. It could well be that an animal is behaving in an odd way because it is terrified out of its wits—and you have made it appear comic and persuaded people to laugh at it. That seems to me to be terrible.

You may ask, why use music at all? People often say "Why cannot you let it be natural, just as it is in the wild". In fact, there is precious little that is natural, in that sense, in any film. You distort speed if you want to show things like plants growing, or look in detail at the way an animal moves. You distort light levels. You distort distribution, in the sense that you see dozens of different species in a jungle within a few minutes, so that the places seems to be teeming with life. You distort size by using close up lenses. And you can equally well distort sound. What the filmmaker is trying to do is to convey a particular experience in as vivid a way as he can. He has to do so without being able to manipulate smell, or heat, and to do it on a small glass screen, lit from behind. And in that process it seems to me he should have reasonable freedom with the resources at his disposal. His aim is to convey the truth about a particular experience. The viewer has to trust in the good faith of the film maker. Suppose there is a slightly threatening situation—in reality. You can't convey the temperature, or the wind, or the smell—all of which, in reality may contribute to that particular threatening atmosphere. But you *can* heighten that atmosphere on film with the judicious use of music.

Music can also be of a particular help in the kind of film that we were making. We were using material from dozens of different sources from all five continents of the world, taken at different times. One of our problems was to weld all this disparate footage into a coherent whole. Music helped very much in that process. It also enabled us to underline parallels, in a not too obvious way. And so on.

(JB) Yes I can see that. In terms of linking though, isn't your own presence strong enough? There were obvious shots where you weren't there, when your voice-over was saying in effect "we're in Borneo now but I'm really in South America." Isn't your own personality strong enough to take the viewer through an hour? Do you need music on top of it?

(DA) Well maybe. But music can produce atmosphere. It can link one continent with another; it can provide a recurrent motif; it can heighten the feeling one gets as you slide down a rope, for example. Sometimes, what people suppose is natural sound—and write to tell us how evocative it was and how much better than anything else—isn't natural sound at all. You might have a close-up shot of an owl ripping apart the body of its prey but could not have got the sounds it was making because you couldn't get a gun-mike near enough. So you then manufacture the sound in the studio. That seems to me to be justifiable as well. Sometimes it may even be distracting to put in the actual sounds. If we put in all the cicada calls in

the jungle with which people are quite unfamiliar, and your subject is something other than cicadas, then that might well distract people's attention from the subject at issue. And we might have to explain that the curious noise that sounds every half minute or so is not a man hitting an anvil with a sledge-hammer but a bell-bird.

(DU) You've mentioned several times that you get letters commenting on the programmes. How do you listen to the audience 'out there'?

(DA) You read their letters; you listen to what they say to you when you travel on the tube; you listen to your friends; you read the newspapers; you have audience research; the BBC logs every telephone comment they get. So in every way that you can.

(JB) That also goes back to an earlier issue about audiences for the films. It strikes me that the book is directed clearly at a market—the sort of person who is going to pay £12 for the book. Did you not have an idea of the people you were writing for and making the films for?

(DA) Well, maybe. All I can say is that I don't use scientific terminology if I can avoid it; and I do assume that my readers are relatively literate and that they will understand adjectives that aren't necessarily ones that you use ten times a day. The films, of their nature, will appeal to a wider audience. If you make a natural history film truthfully, without too much pretention on the one hand or simplification on the other, then a child of six and a professor of science can get pleasure from the same programme. A child of six may have never seen a snake in his life. If he sees one on film crawling over a log, that in itself is an amazement and a fascination. But it might be a snake that no herpetologist has seen alive before, so it can give him just as much of a thrill. People enjoy natural history films for their beauty, and for their scientific interest.

(DU) Which of the audience do you listen to most?

(DA) I listen to them all. But what you actually do, is what suits you. If it turns out that it also suits a major section of the audience—that's fine. If it doesn't, then you should get out of the business. If you don't really know what you want or how you should treat something and decide to take the advice of a committee of 12—then I doubt if you will make much of any quality. But if you tried to listen to a committee of twelve million, then you certainly won't. If you cut out everything that anybody complained about, you would end up with such a vapid thing that it was not worth having. If you get an avalanche of letters which clearly miss the point—then you have made an error. And we do. In the Ocean programme, we had a sequence in which one travelled across the floor of the Pacific in a few minutes, showing the variety of terrain. It was done of course, with models. There was no other way in which you could have done it. I said, in the narration at the beginning "Let me take you on an imaginary journey" and I emphasised the word 'imaginary'. I thought that nobody could possibly think that this was a real journey. We crossed the Pacific in a minute and a half; the vertical scales were greatly exaggerated and so on. But, judging from our post a lot of people *did* think this was a real journey. So we made a mistake. I didn't make it clear enough that it was a model and I should certainly have done so.

(DU) Really, there are two extremes, I suppose, of critical reaction to the programme, one is from the television community and the other is perhaps from a scientific community. How do you react to criticisms from the media?

(DA) Well, I've been in the game for a long time and you come to know that there are some people's advice and comments you value and others that you don't. I can't say more than that, really.

(JB) You were awarded a UN silver medal this year, weren't you? That must be the kind of value that gives you a great deal of pleasure?

(DA) Yes, of course it does. But one is also aware that one is serving as a representative. The occasion was World Environment Day, and the United Nations Environment Programme wanted to draw attention to it. So they organised a happening in the United Nations. They also thought it would be a good idea to bring in a personality or two and give them a medal. So they had to find someone who is widely known to be connected with the environment. There aren't an awful lot of those—so I got a medal!

(JB) Can I pursue the notion of giving people pleasure? I find in teaching that the more you can involve students and create an environment where they are enjoying what they are doing, the better they learn. From what you were saying earlier, that's very much how you see your films—the 'education' comes through the pleasure that people get. What sorts of things in film give most pleasure? Are there certain animals for example that really give people a lot of pleasure to look at? And are you making the film to support that?

(DA) Well, I think we would be wrong to do that and nothing else. Anyone who has been in our game for any length of time knows perfectly well that you are on a winner with apes, and by and large if your subject has more than four legs, you are on a loser. It is easy to make popular programmes about monkeys, and you know it will be difficult to do so about scorpions. But you can't make programmes about apes and nothing else, even if you wanted to. The BBC must produce a couple of hundred programmes on natural history every year. You would run out of apes pretty quickly. In fact you would be very cynical to put up only those ideas that you knew would be very popular. If you are cultivating this particular patch, you know that sometimes you can rest on the plough and sometimes you are going to have to work a bit harder, if you are going to make the whole field properly productive. But even then, the work is often not as hard as you might have supposed before you started. Insects are not supposed to be popular viewing. But a butterfly emerging from a chrysalis is an extraordinarily wonderful sight and people are thrilled by it.

(DU) Are you conscious of having, therefore, a responsibility in the sense of conveying values about environment and about biota that you wittingly or perhaps unwittingly, portray through the programmes?

(DA) Well, I am. In a sense, my very concern for the environment makes it necessary for me to be very careful about the programmes I do. If you work in public television, you soon learn that the person you have to watch out for is the committed propagandist—no matter how laudible his cause or his motives. You have to do your very best to try and present a balanced view. I think television, in the event, gives a very generous hearing to the environmental lobby. If I were a man working in ICI, let's say, trying to turn the country round the economic bend, I might have a bit of a grouse every now and then that my arguments for using insecticide of the downlands are seldom heard. As a conservationist, I think I would be doing the cause a great disservice if I tacked on to the end of every single

programme that I did, a little homily to explain yet again that mankind is wrecking the environment that I have been showing. My job as a natural history film maker is to convey the reality of the environment so that people will recognise its value, its interest, its intrinsic merit and feel some responsibility for it. After that has been done, then the various pressure groups can get at them through their own channels and ask them to send a donation to, let us say, the World Wildlife Fund. I am a Trustee of the Fund, and other conservation bodies as well. I try to serve them by giving public lectures and in other ways. Having said all that, it would be just as bad to ignore the conservation issue as it would be to overemphasise it. So the last half of the last programme in *The Living Planet* was devoted to it. I hope it was the more effective for being focused and refined and placed there, rather than coming back to it again and again and again in every one of the 12 programmes.

(DU) This raises the whole issue of how you conceive the human species in the environment. One comment made to me by many people has been that the human does seem to be tacked on at the end of the programme. To them that almost seems to be a value statement, it says something of perhaps the way a zoologist views the human species.

(DA) I take the point; and I would answer that, to some degree at any rate, it is historically correct. There is also a fundamental difference between pre-industrial and industrial man. If you are making a programme about the way organisms react to the environment, then those two kinds of humanity are very different. Pre-industrial man learned to live in the forest and adapt to it. Industrial man did not react to the forest. He simply knocked it down. Eskimos learned how to live in Arctic conditions. Industrial man lives there by creating enclosures in which he could create a quite different micro-climate that suits him better. So we showed the Warani Indians in the jungle programme, and the Eskimo in the programme on snow and ice, and the Bushmen in the deserts. Then we gave industrial man and the environments he has created a programme at the end of the series.

(DU) There is an interesting contrast I think between the book and the film in respect of the Prairies. In the book you spend about a page telling us about the mindless slaughter of the bison, but presumably because you have no film, it doesn't appear in the film at all. In the film what we see is tribesmen killing cob crossing a river. I wonder, does that actually reflect a value coming through from you?

(DA) Not really. When I was writing the book, I was able to survey the world without worrying whether or not film was available. So I was able to range not only in space but in time. When I did that, I became very aware of how widespread man's massacre of plains-living herbivores had been through history. Not just the big game of Africa which we all know about—but bison in North America, which are often forgotten, and saiga antelope in Eurasia which people do not know very much about at all. That was difficult to put into the film because there is no film available or gettable. So instead we focused that idea on the white-eared kob. I didn't write a lot about them in the book partly because I was not there and partly because the phenomenon of pre-industrial man killing animals for meat had been already dealt with several times—Eskimo hunting seals, Warani hunting monkeys.

Actually, the grassland film was a considerable problem. After all, there is no ecosystem in the world that has been more intensively filmed and photographed than the grasslands of East Africa and the big game that lives on them. On top of that we had already featured the wildebeest migration—yet again—in *Life on*

Earth. Yet the seasonal migration of great herds of herbivores is undeniably one of the most characteristic and important events on the African plains. We could hardly not mention it. One of the researchers, Richard Matthews, suggested that we should film, instead of the wildebeest, the migration of the white-eared kob. Nobody else had filmed it at the time, he said, and he believed it would be very exciting footage. So we put our money on the white-eared kob. And it was a *lot* of money. The southern Sudan where they were found is a very difficult place in which to work, but Richard, who was brought up in Kenya, reckoned that he could do it. In fact, he didn't get as dramatic a sequence on the migration itself as he had hoped, but he did get remarkable film of the Murle people hunting them. And in the end, it was that sequence with which we ended the film.

(JB) I am very interested in your categorisation of people in terms of basically two kinds—pre-industrial people and post-industrial people. That explains for me the rapidity of the jump in that last programme from early domestication to the Sears building—which is a little bit difficult to come to terms with.

(DA) The difference, of course, is that for pre-industrial people, the environment reacts on them; and for post-industrial people, it is the other way around.

(JB) Well can I take you up on that. It does seem to me that there is a kind of biological determinism in your films. You do talk about people as being 'the species', 'the species on the ground', 'the species who are inhabiting this 12,000 year old cave or building,' or whatever. Can I ask you about your perceptions and views about the importance of culture and in particular the contrast in terms of cultural values and attitudes towards environments, animals and plants?

(DA) The pre-industrial and post-industrial distinction was made to explain why I didn't put modern industrial man into the jungles programme but gave him a programme of his own as a creator of a special environment, and the latest to appear on earth. Of course, the question of conservation does raise all kinds of moral issues—and pre-industrial man has moral responses to it just as industrial man has—or should have. To my mind, the most alarming and potential disastrous moral attitude is the one stemming from the Judaeo-Christian ethic which gives the idea that the natural world is an eternally stocked larder and man has every moral right to help himself to whatever he likes in whatever quantity from its shelves. One can understand how such an attitude should evolve in a desert where a rodent appearing over a sand dune is a gift from God, because it is the difference between life and death. Why it turned up and where it comes from you have no idea. It was, as it were, propelled by fate. Well, we know more about it now. One of the propositions on which a modern conservationist ethic now rests is that unless we take proper conservationist measures we will actually devastate the earth and lose the very plants and other organisms that provide us with our food—and many other things as well. But we also have a moral responsibility. I cannot defend that proposition in a scientific way. Morality isn't just a profit or loss account. But I believe we *do* have a responsibility to maintain the biological diversity of the earth. Similarly I believe it is morally wrong to cause unnecessary cruelty to animals. That, too, is a moral proposition and one that is not dependant upon scientific validation.

(JB) I was also very struck in the last programme where the message that came over very powerfully at the end for me was to do precisely with that moral proposition. That

we have a responsibility to care. But at the same time I wondered to what extent by focusing on individuals, by saying that you *must care—Mrs Smith, sitting there in your armchair—that you were in fact ducking out of the very real political debate about the rain forest being exploited because Third World countries can't service their debt. And what do you do about that kind of dilemma?*

(DA) You do different programmes. And, of course, we have. But apart from that, I do things in the IUCN and the World Wildlife Fund, and in various other organisations with which I am involved. It is a continuing problem in television—just how far should you wring peoples withers over problems about which they can do nothing? What do you do about the Sahel? What do you do about the starving millions? Even if you give money to those charities that try to send relief, there is pretty good evidence that much of it doesn't actually reach the people who are starving. And if it does reach them, it is spent on the wrong things. So what do you do? You might say, that in that case you shouldn't tell the public anything and pretend that it doesn't matter. But you cannot do that either. So you have to do something in-between. What I do is to argue, in public meeting and elsewhere, that we have to make sure that our politicians act responsibly. We have to ask them what their environmental policies are. You mentioned that silver medal in the U.N. What I said at the ceremony was that ordinary citizens in the U.S. or here can't actually stop the felling of the rain forests in Brazil. Neither can we stop pressure being put on people to fell rain forests in order to service their debts. But we can say to our politicians 'Look, we understand about this and we realise that we must make certain sacrifices in order to stop it happening; and we are prepared to do so'. But those mega-problems can only be solved by mega-decisions; and mega-decisions can only be taken by people in power. They can't actually be taken by me. I can give my 50p to the World Wildlife Fund, but I am deceiving myself if I think that is stopping the destruction of the rain forest immediately.

(JB) But isn't education about power, about giving individuals a better sense of power, enabling them to take decisions, to participate?

(DA) Yes, of course it is.

(DU) Do you see the programmes as having a role in this respect?

(DA) Yes I do. There has certainly been a change in public attitudes and I dare say that television, among other influences, has had something to do with bringing that about. If 30 years ago, you had gone into Trafalgar Square and said "Stop the bloody slaughter of whales" people would have said "There's another of those cranks". Now if you say that, tens of thousands of people will agree with you. Thirty years ago, there wasn't even a Department of the Environment. You may say that it is not following the right policies even now, but a least it is there.

(JB) So the shift has been much more dramatic in terms of animals than it has in terms of plants. What you're saying is that in 30 years time, if it isn't too late, people will actually be standing up in Trafalgar Square and saying "save rain forests".

(DA) But they *are* doing. People are saying that right now. Actually, I am not at all sure that we haven't put too much emphasis on the rain forests. As you may know, the World Wildlife Fund's campaign this year is for plants in general. I think it is a very good campaign, for I believe it can achieve really solid visible results. We can actually say—okay, we must save this Potamogeton, or whatever and send out a

botanist who can collect enough specimens and propagate them in botanic gardens to make sure that the species doesn't disappear for good.

(JB) I'd like to ask you, what do you think the covert messages are in the films about you? One point listening to the domestication debate struck me. You show a whole series of factory-farm animals and the message which came through very clearly is that these poor animals haven't got any adventure and that rang a bell for me. I wondered whether you were in fact identifying in terms of how you make the films? Do you see the adventure as being something very much about you? Are your films personal statements in that sense?

(DA) No, I wouldn't say that. You can't help being yourself, but I think one has to have very strong reasons as to why one appears in a programme at all, and when and where it is right to do so. You have to be very cautious about sticking your head in front of the lens and saying "You really should look at this fantastic creature behind me"—and then not allowing the audience to see it. I think a narrator can properly appear at the beginning—so that people shall know whose voice it is they will be hearing. And he should appear at the end to say goodbye—that is only polite. In between, there must be very precise reasons why he appears. It may be that he can show something simple like dimension. It may be that, from his very appearance, he will convey something about the sweaty heat, or the bitter cold. It may be that he has to explain a theoretical abstract proposition which can only be done with words. Or it may be that he provides a linkage or makes a transition. Those are the kind of reasons why he should appear. But he should never appear for no better reason than that he just wants to be in the picture. Occasionally, of course, you sin. Occasionally you find yourself in the picture for no better reason than bravado and derring-do. That is not really justifiable—though I won't say it has never happened.

One time when the rules got a little bent was when we went to film the gorillas in Ruanda. Before we started filming it was agreed that the purpose of the sequence was to demonstrate the importance of the primate hand with its opposable thumb and forefinger, an evolutionary advance that was to make possible tool-using, with all the consequentials that has had on man's development. We got quite close to a group of gorillas, and I was about to make this theoretical point when, as zoologists say, there was an interaction! A couple of baby gorillas emerged from the bushes and sat on my feet. One started to undo my shoe laces. We stopped filming—that was the agreement—this sequence was not about derring-do. But then the cameraman and the director decided to take a few feet just to show the lads back home. So they filmed about five minutes of what was in fact a half-hour encounter. When we got the film back to the cutting room, people said "Oh you've got to put that in". So in it went—rather against my better judgement.

(DU) Aren't you in a curious position in that only David Attenborough can do this kind of series, or leastways there is a major public identification with David Attenborough in this kind of role. Yet you are telling us that what you want to do is step back from that role. Clearly you must continue to create the image of David Attenborough.

(DA) Well, it is difficult for me to talk about my own image. The fact is that one gets an image, that may have little to do with one's true personality, in spite of yourself. If you do no more than put your voice on a film, you become identified with it and its attitudes. One of the things I do, simply as a sort of service in the Natural History Unit, is to speak commentaries for films that are made by other

people. Now I can say till I am blue in the face "This isn't my film. It was made by someone else who speaks a foreign language and I am simply speaking his words". But people will still come up to you and say "How did you get those shots last night"? You reply "I wasn't there" And they say, "I know you weren't; but all the same, the way you managed to get those shots was extraordinary". And that is troublesome.

(DU) But for you to fund that kind of enterprise you have to have that kind of image, don't you?

(DA) It is convenient. It is useful for the BBC to have a number of what you might call nature-jockeys—people who are a kind of label that you can stick on a programme—whether it is a political programme, a sporting programme, a science programme—so that when people see his name, they think, "Oh well, I know the sort of thing he'll do, and the kind of programme that will be".

(JB) Was it difficult in fact, raising the money for the series?

(DA) No, it wasn't. The fact is the BBC makes money out of enterprises like this series. They sell pretty well everywhere—in small countries where the price you can get for them hardly covers the print and translation costs, and big countries like America, Germany, Australia, Canada and so on, where you can get a very good price indeed. Whether you get prior commitment—co-production as the term is—depends on how you want to deploy your investments and programme moneys. But it is nice to know that the programme is re-sold and that therefore you have enough money to enable you to get the best quality.

(JB) But does the fact that the BBC is selling this programme to virtually all countries in the world have an impact on the content in terms of how political you can be, for instance, or how conservation-oriented you can be?

(DA) Not at all. Nor is it difficult to retain one's independence. If we were doing something about international smuggling, or about sending the troops in to the Golden Temple at Amritsar, well that is a very different proposition. The BBC does its damnedest in such situations to remain objective. But in my field there has never been a problem. I can honestly say that I have never changed a word—not a phrase or a word or anything—in any of the series, ever. And what is more, if people came along and said "we want you to change this" I suspect we would say—"Then don't bother to buy the programme". I musn't make this sound as though there has been a tremendous battle and I am standing there, defending my independence, with the blood trickling down my face. There really has never been any difficulty.

(JB) Because natural history seems to be politically neutral?

(DA) That's right.

(DU) You retain control on what is shown from the series, wherever it's shown?

(DA) Yes. There are phrases in co-production contracts like 'permission will not be unreasonably withheld' which is perfectly fair. Also there are audiences for whom a chap talking in some incomprehensible tongue turning up every few minutes to speak in vision is not wildly exciting. So one accepts that there are places and markets where that chap should be taken out or replaced in some way. One understands that, and one doesn't want to be stiff-necked or pig-headed about it. But equally, there were once suggestions that when *Life on Earth* was to be shown in America, I would be replaced by a film star standing in front of a back

projection slide of different landscapes. And I simply said "No thank you very much. My contract allows me to object to that—and I object".

(DU) Do you envisage the series being used by educationalists?

(DA) Not when I am making it. I am delighted that it should be. And I know that some universities show episodes from it as part of their courses. I am delighted that they should. I couldn't wish for a greater compliment.

(JB) What are you going to do next?

(DA) I don't really know. The fact is that I was very worried as to whether it was sensible to do a sequel to *Life on Earth.* That series had a quite extraordinary reception. It was really much more successful than we could possibly have hoped. Obviously, we would have been silly to let it go at that. On the other hand, producing sequels is a hazardous business—we've all heard of disasters like *Son of Lassie* and *Jaws 2.* When we did decide to go ahead with *The Living Planet* I prepared myself for a lot of critical stick. So when journalists asked whether I was going to do a third series, I did say—two is enough. I still think that is probably right. Twenty-five one-hour programmes in this particular style surveying the world, with me appearing from behind boulders and down trees is probably enough. Maybe it is time to think of something else.

There is a mass of things to do. In point of fact at the moment I am working on a single film about Audubon, the American ornithologist; next year happens to be his bicentenary. Ideas just come out of the woodwork. Then I have got another project in mind that will be based entirely in Europe. And I've got quite a lot of other little bits and pieces of writing I want to do.

(DU) You have moved from presenter to administrator back to film-maker and now in essence to scientific writer.

(DA) I don't really think I could say that—on the strength of two books.

(DU) Enormously successful books!

(DA) Yes, they have been successful, but then that's a result of their television connections. I have no doubt whatever that I could produce you a dozen other books that do their job just as effectively as mine but which haven't had television coverage and therefore haven't had comparable sales.

(DU) Which role are you happiest in? Would you like to be an academic zoologist for example?

(DA) I don't know, really. Looking back on it: I didn't take a research degree and as a consequence, I feel that there is some kind of secret perception that is denied to me.

(DU) There is not!!

(DA) Well, you say that, but I am not sure you mean it. It seems to me that research must be like turning over a stone and finding there some brand-new newly-minted gleaming fact that no one has ever seen before. That must give you a marvellous thrill. And I have never had that.

(DU) But you have lived your entire life very close to that, haven't you?

(DA) Yes, watching other people do it. But I haven't done it. The grass on the other side of the hill, I know, is greener and I am not really complaining. But when I took my degree in the mid-40s, I was only allowed two years anyway—it was what

was called a war-time degree—and when it was finished, I had to go into the Navy because of conscription. When I emerged from that, the kind of research I saw going on in zoology in Cambridge was not the kind of behavioural ethological research that I was interested in, as far as I could see. I didn't want to go back to looking at dogfish in formalin. So I didn't go back to university at all. Now I regret that because, as I say, I think there is still a veil between me and the truth which you, and people like you, have pulled aside and have been feasting your eyes on.

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BIOGRAPHICAL NOTES

David Attenborough was born in 1926 and grew up in the English Midlands city of Leicester where his father was Principal of the University College, as it then was. He read for a degree in zoology at Clare College, Cambridge, 1945–1947. He spent his national service in the Royal Navy and on being demobbed in 1949, he became an editorial assistant in an educational publishing house. His long service with BBC television began in 1952 when he joined as a trainee producer. His career with the BBC has had two distinct strands, first as a programme maker and second as an administrator.

He was Controller of BBC2 between 1965 and 1968, and then became Director of Television Programmes and a member of the Board of Management of the BBC, 1969–1972 after which he resigned to become a freelance film maker and writer.

His zoological and ethnographical films were made on expeditions to Sierra Leone 1954; British Guiana, 1955; Indonesia 1956; New Guinea, 1957; Paraguay and Argentina 1958; South West Pacific 1959; Madagascar 1960; Northern Territory of Australia 1962; the Zambesi 1964; Bali 1969; Central New Guinea 1971; Celebes, Borneo, Peru and Colombia 1973; Mali, British Columbia, Iran, Solomon Islands 1974; and Nigeria 1975. The films between 1954 and 1964 were made for his very popular natural history series called *Zoo Quest.* David Attenborough wrote and presented BBC series about tribal sculpture called *The Tribal Eye* in 1976. This was followed by the two series discussed in the interview.

Life on Earth was a 13 part series on evolution which was broadcast on British Television in 1979 and which has been shown in many countries around the world. *The Living Planet,* its sequel was shown on BBC television in 1984 and is now being distributed to other countries (see notes below for details of production teams, distribution etc.).

David Attenborough has received many awards in recognition of his contribution to both ethnographic and natural history film making, his contributions to academic research and his role in developing public awareness of environmental and conservation issues. He has received awards from the Society of Film and Television Arts (1961; 1970); the Royal Television Society (1966); and was made a Fellow of The British Association of Film and Television Art in 1980. Although he feels that he has not—yet—managed to make an original contribution to knowledge (see the end of the interview), his work has gained very wide recognition. He has awarded the Silver medal of the Zoological Society of London (1966); the Cherry Kearton medal from the Royal Geographical Society (1972); the Kalinga prize from UNESCO (1982) and a Silver Medal from the United Nations (1984). He was elected a Fellow of the Royal Society in 1983. He holds honorary degrees from universities of Leicester (1970); City (1972); Liverpool (1974); Herriot-Watt (1978); Sussex (1979); Glasgow, London and the Open University (1980); Bath (1981); Ulster, Birmingham and Durham (1982); Cambridge (1984).

He has extensive interests in the conservation movement. He served on the Nature Conservancy Council between 1973 and 1982. He has been a Trustee of the World Wildlife Fund since 1979. He is a Vice-President of the Royal Society for the Conservation of Nature, and a Trustee of the British Museum since 1980.

PUBLICATIONS

1956 *Zoo Quest to Guiana* Lutterworth Press, London.
1957 *Zoo Quest for a Dragon* Lutterworth Press, London.
1959 *Zoo Quest in Paraguay* Lutterworth Press, London.
1960 *Zoo Quest in Paradise* Lutterworth Press, London.
1961 *Zoo Quest to Madagascar* Lutterworth Press, London.
1963 *Zoo Quest under Capricorn* Lutterworth Press, London.
1976 *The Tribal Eye* BBC Publications, London.
1979 *Life on Earth* Collins in association with the BBC, London.
1984 *The Living Planet: a portrait of the Earth* Collins in association with the BBC, London.

THE LIVING PLANET: PRODUCTION & DISTRIBUTION DETAILS

The series was begun in 1980 and involved a production team of 30 people. The total cost was £1,250,000 and was co-financed by the BBC and Time Life Videos.

The 12 programmes, each of which is 55 minutes duration, are:

(1) The Building of the Earth
(2) The Frozen World
(3) The Northern Forests
(4) Jungle
(5) Seas of Grass
(6) The Baking Deserts
(7) The Sky Above
(8) Sweet Fresh Water
(9) The Margins of the Land
(10) Worlds Apart
(11) The Open Ocean
(12) New Worlds.

Those wishing to purchase/hire the programmes should contact their national BBC or Time Life Video offices. The relevant addresses include the following:

Australia
BBC Enterprises Ltd, Westfield Towers, 100 William Street, Sydney, NSW 2011, Australia (Tel 358–6411).

Canada
BBC Enterprises Ltd, Suite 1220, Manulife Centre, 55 Bloor Street West, Toronto, Ontario, Canada M4W (Tel 416–925–3891).

United Kingdom
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