

The Edge – Water Babies

Final Script

Waves / Surfers	
WS Crowds in street	<p>00:32 Narrator: The human being is the most successful mammal on earth. But where did we come from?</p> <p>6 million years ago, our earliest ancestors stood up and began to walk on two legs.</p> <p>But why did we evolve differently to the other apes? And how did we become the first conscious animal on the planet?</p> <p>That's where the arguments begin.</p>
Super 8' of walking over savannah mixed with forest and chimp in trees	<p>00:57 Conventional wisdom states that as Africa grew hotter and drier, apes and humans parted company.</p>
	<p>01:03 But there's also a far more controversial idea. Maybe we evolved to walk at the water's edge, with the instinct to swim, hold our breath underwater and fish. This so-called Aquatic Ape theory could even explain why we grew such large brains.</p>
Underwater Babies Title: <i>'Water Babies'</i>	<p>01:29 So, were we all once water babies?</p>
CU nail on fossil Hammering stones looking for fossils	<p>01:37 Narrator: Ever since the first fossils of our ancestors were unearthed, anthropologists like Professor Leslie Aiello have been trying to shed light on the mystery of our origins.</p>
Title: Prof. Leslie Aiello Anthropologist, UCL	<p>01:47 Leslie Aiello sync: We're trying to ask questions of the fossils, we're</p>

	trying to ask questions of the sites, we're trying to ask questions of the paleo environmental evidence, to piece together what type of an environment it was these early ancestors lived in.
CU fossils slow shutter speed mix with water shot	02:02 Narrator: The question is, did these early ancestors live by the waterside?
Elaine Morgan archive (BBC)	02:10 Narrator: The Aquatic Ape theory first surfaced in the 1970s, with the publication of a book by Elaine Morgan. It proved to be an instant hit. Elaine had been inspired by the ideas of eminent zoologist Sir Alister Hardy.
Chimps in trees – BBC Title: <i>Elaine Morgan</i> <i>Writer</i>	02:25 Elaine Morgan sync: Alister Hardy had had a different theory about why we are so different from the apes, why we walk on two legs, why we have a layer of fat, why we lost our hair, and even why we can speak. And he thought that we might have gone through a period of being semi-aquatic and adapting to water.
Reconstruction feet in water Oxford GV's	02:55 Narrator: Amid the dreaming spires of Oxford, Dr. David Horrobin was also intrigued by Hardy's ideas.

<p>Oxford GV's</p> <p>Title: Dr. David Horrobin Psychiatrist & Neuroscientist</p>	<p>03:02</p> <p>David Horrobin sync: Well I was running the Science Club at Balliol College in Oxford, and Alister Hardy published his article in the New Scientist. And so I went round to see him and asked if he would come and give us a talk in Balliol about the aquatic ape theory. And as far as I am aware that's the first and perhaps the only time he's actually lectured in public about the aquatic ape theory. And it was a wonderful occasion because he really was wildly enthusiastic about this and presented it in a way which I found at the time totally convincing.</p>
<p>Title Prof. Sir Alister Hardy Biologist, University of Oxford 1972</p>	<p>03:35</p> <p>Sir Alister Hardy: It wouldn't surprise me if among the primates, one stock was forced by competition to feed along the shore and go further and further out and learning to stand up and picking things up from the..(gets up from chair and does picking up and feeding action action)...going down and picking things up and feeding from up above water and he would be continuously doing this and so he gradually learnt to get the erect posture....</p>
<p>CU foot walking in sand by sea GV's Tobias with fossils</p>	<p>04:05</p> <p>Narrator: However, the fossil hunters of the time felt that Hardy's theory didn't stand up to scrutiny.</p>
<p>Title (3 lines!): Prof. Emeritus Phillip Tobias FRS Director Sterkfontein Research Unit University of Witwatersrand</p>	<p>04:12</p> <p>Tobias sync: Ever since Sir Alister Hardy put it forward in 1960, it has been scorned, derided, made fun of. Nobody has really taken it seriously. You either burst into guffaws of uncontrollable laughter or you tap your head in respect of the person speaking it.</p>

CU Tobias' hand holding fossil	04:41 Narrator: One of the most eminent palaeontologists in the field, Professor Phillip Tobias has been excavating African fossils for over 50 years. Along with everyone else he's derided the aquatic ape theory. But now he's reconsidering.
Prof. Tobias sync	04:56 Tobias: I plead – and this is the part that I have tried to play for the last 3 years – for the hypothesis to be given a square deal. Fair consideration.
Horrobin sync	05:07 Horrobin sync: The idea that at some time in human evolution - we spent a lot of time by the water and that influenced the way our behaviour, our physiological functioning and our brains work. That I think is going to become part of the mainstream.
Tilt down off sky to WS Cape Town Mix fossil skeleton Mix savannah landscape	05:27 Narrator: Charles Darwin's theory that our ancestors split from the great apes in Africa is backed-up by the fossil record.
Tilt up fossil skeleton	05:34 But why did this split happen?
WS savannah landscape reconstructions of people walking past cam	05:39 It's believed that around 6 million years ago, Africa became hotter and drier. Conventional theories suggest that this change forced our ancestors to become bipeds. Standing upright on two legs, we strode out across the hot, dry savannahs while the ancestors of modern day chimpanzees stayed in the trees.
Disolve into WS savannah landscape	06:02 This theory is known as the 'savannah theory' of human evolution - and it's under attack.

Elaine Morgan	<p>06:10 Morgan sync: I am convinced that we first went into the water and began to get adapted to it at the time when we split from the apes, because I think it is the thing which explains most of the differences.</p>
CU sand blowing	<p>06:26 Narrator: But Professor Peter Wheeler thinks the traditional theory of evolution isn't about to be washed away.</p>
Peter Wheeler	<p>06:34 Peter Wheeler sync: Certain key differences between humans and apes, for example our bipedal posture, the loss of body hair, the increase in body size and the acquisition of a taller, thinner, what we call a more linear physique, all would have conferred significant benefits in more open equatorial environments.</p>
Peter Wheeler	<p>06:56 The advantage of bipedalism is threefold. you gain less heat from the sun, you produce less heat internally in the muscles, and you're able to lose this heat more easily to the surrounding environment. And when you put all those together, what you find is an animal able to stay out in these environments longer, engage in much more active activities, and also it's able to do that while expending less water.</p>
Algis K by pool Title: Algis Kuliukas Anthropology masters student, UCL	<p>07:19 Algis sync in terms of keeping cool, er if you were living by a river well then you can't beat going for a dip to keep cool.</p>
Forest dissolve to WS super 8' figures in savannah landscape	<p>07:31 Narrator: However, the savannah</p>

	theory faces growing opposition.
Super 8' feet in grass dissolve to POV through forest	07:35 Rather than walking tall on the hot savannah, our ancestors were actually still living deep in the forest.
Aiello sync	07:42 Aiello sync: I think what's happening is that we're realising that our earliest ancestors didn't necessarily live in open savannahs, and this has left the door open again for the aquatic ape hypothesis.
Tobias sync	07:57 Tobias sync: The old idea that savannah triggered bipedalism is no longer tenable. Open the window I said and fling it out. The savannah hypothesis is dead. So we're back to square one.
Africanus skull – going dark Footprint washed away	
Tobias sync & VO	08:18 Tobias V/O & sync: The aquatic ape hypothesis lists in recent times the uprightness as a consequence of spending a lot of time in the water to keep your head above the water. If you were a quadruped going on all fours like that your head would be below the water and it wouldn't be compatible with life. And so one of the features that some of the upholders of the aquatic ape theory believe resulted from water emphasis was the uprightness.
CU water in pool	09:03 Narrator: Algis Kuliukas strongly supports this idea.
V/O 'wading' chimps (if we find it!)	09:08 Algis sync & V/O: My particular thesis has got three strands to it, one looking at extant apes. I'm going to [trawl through all the literature to] find as much information and evidence I

	can that shows that extant apes do wade bipedally in water, I think there's quite convincing evidence for that.
(intecut with underwater carrot-tops tip-toeing through the water in pool)	09:22 Sync: (continuing from above* but big cut in the middle!) Secondly with human subjects, I want to go to a place like this and see humans in shallow water and actually see at what kind of depth of water is wading more efficient than swimming. (cut) and then try to hypothesise about a kind of environment where erm that kind of depth of water would be at a premium, so for instance swamps or seaside, lakeside, or maybe even rivers, er to get a feel for that kind of environment where wading would actually be the best locomotion.
Aiello Sync and over Australopithecus skull and skeleton.	09:56 Aiello V/O & sync: In terms of the comparative anatomy, those early first bipedal ancestors have very much in common with modern chimpanzees that are our closest living relatives. Many parts of the skeleton are very similar, indicating that they engaged in a climbing type of adaption, but they were bipedal, walked on two feet when they were on the ground. But there's nothing whatsoever to link this bipedalism with a development in an aquatic environment.
Underwater shot of wading legs walking away. Intercut slow shutter speed of both Algis and Wheeler talking.	10:35 Narrator: The war of words looks set to rage on. The problem is, it's impossible to prove what really made us develop a two-legged gait.
DV shot of A. Africanus skull	10:45 The patchy fossil record can't tell us whether these animals lived in water. But why rely on fossils when there are living clues for us to examine?

Chimpanzees & Humans – comparative behaviour

<p>Pull focus chimp skeleton to human skeleton</p>	<p>11:01 Narrator: Perhaps the answer is to compare ourselves with our closest cousin in the natural world – the chimpanzee.</p>
<p>16 mm archive of jeep through jungle Title: Uganda 1962</p>	<p>11:15 Professor Vernon Reynolds has been studying chimpanzees in the wild for nearly 40 years.</p>
<p>16mm archive of Vernon and wife looking at chimps title: Prof. Vernon Reynolds Bioanthropologist, University of Oxford</p>	<p>11:27 Vernon Reynolds V/O & sync: I was very interested in a human who wasn't quite human I think. I was a young man in those days when I first started... studying chimpanzees in 1962. My wife and I went out to Uganda to the same place where I go now. Been doing it all my life.</p>
<p>16 mm archive of chimps crossing road</p>	<p>11:50 We're 5 million years or so away from the chimp which means about 5 million years ago there was an ancestral form living in Africa it actually looked more like a chimp than a human but it was the common ancestor of both.</p>
<p>Underwater man diving past cam.</p>	<p>12:44 Narrator: One of the things that differentiates us from chimpanzees is our ability to swim and above all, hold our breath underwater. From the day we're born, we possess this diving reflex - and we never lose it. But if we didn't evolve in or near water, why on earth did we develop this reflex?</p>
<p>Peter Wheeler</p>	<p>13:05 Peter Wheeler sync: We have voluntary control of breathing. but how that control of breathing evolved and what it's for is an open question. It may have evolved for going into water quite recently, it may have evolved for control in vocalisation and speech, we don't really know why it first occurred. It's very useful in diving, but that's not necessarily why it first appeared.</p>

Leslie Aiello	<p>13:26 Leslie Aiello sync: There may also be other explanations for the diving reflex. And what it takes is somebody to look into it in detail, research what the reasons for the diving reflex actually are, and only then can we begin to test the hypothesis that this may have developed in an aquatic environment.</p>
Underwater baby diving Vernon Reynolds V/O & sync.	<p>13:46 Vernon Reynolds sync: It's not only babies who ... we all have a diving reflex and I think it must be that we've evolved this habit through selection at a time when we were in the water. No I think it's very good proof of the aquatic idea.</p>
Slomo CU of baby holding breath under water	<p>14:01 Narrator: So is our ability to swim and hold our breath unique among primates?</p> <p>Unlike humans, chimpanzees are reluctant waders, but what are they like as swimmers?</p>
	<p>14:13 Vernon Reynolds V/O & sync: Chimps are very scared of water. Chimpanzees hate any kind of depth of water. ... even a couple of feet in depth or a bit more and chimps generally speaking will keep well clear, they don't go near. Q. why? Vernon: Well because they'd drown, chimps drown as soon as they go into the deep water. As soon as the head goes into the water, they panic and drown. And I have myself pulled a chimpanzee out of a moat erm there was a captive chimp fell into a moat and well I was amazed. I watched it happen and thought you're a silly chimp going near the water and it slipped in and fell in. It was a young adolescent female. And it went in and there were a few bubbles and that was it you know the water was still. There wasn't even much thrashing about. Q. Just sank like a stone. Vernon: It sank</p>
Beach shots people in water	<p>15:02</p>

	Narrator: While chimpanzees have a fear of water, we humans seem to revel in it. Yet another argument in support of the aquatic theory.
Archive fresh water shots	15:09 But water isn't just for swimming. As humans need to drink more than any savannah-living animal, we must have evolved near fresh water.
David Horrobin Fade to black	David Horrobin sync: I think the other thing which makes physiological sense is that we are an animal which absolutely requires huge amounts of water. Our kidneys don't work all that well and so at all times during our evolution, we must have had access to large amounts of water.
Backlit people on beach	15:40 Narrator: A thirst for drinking water and our in-built diving reflex are powerful points in favour of the aquatic theory. But it's impossible to date them and they may both have evolved very recently.
2 shot Seiving - sea BG	15:54 Kidneys and the diving reflex do not survive in the archaeological record, so what is still missing in support of the aquatic idea is some solid evidence linking our ancestors to water.
CU hands	16:05 To do that we have to take another look at the fossils.

Fossil crania shot in Johannesburg with brain casts next to them	16:13 Narrator: The skulls of our ancestors <i>are</i> preserved in the fossil record. Pieced together, they tell the incredible story of the one thing that ultimately made us unique – our brain. Recent discoveries show that water played a crucial role in this vital evolutionary period.
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Bigger brains & the Aquatic Ape theory

<p>Archive – shots of chimps walking on 2 legs. Chimp sits down, has a scratch.</p> <p>Graphic time line runs along below 6 million years... 5 million years.... 4 million years.... 3 million years... 2 million years</p>	<p>16:32</p> <p>Narrator: Once our ancestors had made the dramatic move to two legs, six million years ago it seems evolution paused to catch its breath.</p>
<p>Chimp uses tool mix with shots of flint knapping.</p> <p>Homo Habilis skull</p> <p>graphic stops at 3 million years</p>	<p>16:42</p> <p>Then, around two and a half million years ago, simple tools start appearing in the fossil record and brain size begins to increase.</p>
<p>Graphic – brain size 5 m. years ago on L. modern brain on R.</p>	<p>16:54</p> <p>Over the next two and half million years, brain size continues to grow. But the final, massive leap, occurs relatively recently – just over one hundred thousand years ago.</p>
<p>CU move over ‘modern’ skull</p>	<p>17:10</p> <p>Today, we have a brain that's three times the size it should theoretically be.</p>

<p>Title: Prof. John Parkington Archaeologist, University of Cape Town</p>	<p>17:16 Parkington sync: There's a very strong relationship between brain size and body weight throughout all mammals but modern people are exceptional in the extent to which they've been able to support a very large brain size. Much larger than you would predict from their body weight. And archaic hominids were not as developed in that respect as we are. So we really need an explanation as to why modern people have such large brains in relation to their body weight.</p>
<p>Pan past CU skull</p>	<p>17:46 Narrator: The question is, how did we manage to grow such huge brains?</p>
	<p>17:56 David Horrobin sync: If we were to grow our brains - as we clearly did - then we must have had access to water based food. our brains need the sorts of fatty acids which are found in water living animals, plants, birds and so on.</p>
<p>Chimp in tree Fish shots (to be shot on DV)</p>	<p>18:09 Narrator: Unlike humans, Chimpanzees don't eat fish and their brains are over 60% smaller than ours.</p>
<p>Fish shots</p>	<p>18:17 Is this further proof that humans led a more aquatic lifestyle in their past?</p>
<p>Aiello sync</p>	<p>18:22 Leslie Aiello sync: It may be important, but the question is, when we started to eat fish, and until there is evidence that these earliest ancestors were eating fish, all we can do is speculate.</p>

Slow shutter speed of 'chemical' image behind Horrobin	18:35 Narrator: Nevertheless, to build our huge brains, we needed chemicals known as long-chain fatty acids.
David Horrobin	18:42 David Horrobin sync About one third 20% of the total weight of the brain - is made up of these key fatty acids which ultimately come from the water food chain.
Fish	18:53 Narrator: But mainstream scientists oppose the aquatic supporters as to where these key nutrients came from.
Peter Wheeler	19:00 Peter Wheeler sync: These nutrients would have included bone marrow, the spinal cord and the brain itself which of course is the richest source of these particular fatty acids. So we don't have to invoke aquatic foods or aquatic environment to show how our ancestors got these fatty acids because we could synthesise them ourselves and get them from alternate sources
David Horrobin	19:20 David Horrobin sync: I don't think we need to go out and kill lions and things in order to get the fatty acids we needed for the brain; we could do it by gathering all these small creatures which happened to live by the water side.
Wheeler	19:34 Peter Wheeler sync: There are plenty of people today who grow up quite normally with normal brain development who never eat fish in their life. I certainly didn't eat fish until I was in my 20's and I would hope that I have a fairly normal-sized adult brain.

Super 8' feet in water	<p>19:47 Narrator: No doubt that's true but while we hunt for clues as to whether our brain food came from flesh or fish, recent evidence states that fish is still good for the brain.</p>
David Horrobin	<p>19:58 David Horrobin sync: There's very interesting recent work from National Institutes of Health in the USA, showing that within the USA people who don't eat fish have much more depression than people who do eat fish. So even within a Western population inside a single country, there is now good, modern evidence that eating fish affects the brain.</p>
Fishing shots David Horrobin	<p>20:25 The chemicals which we need for our brain are actually made by micro-algae. And these micro-algae produce these chemicals. They're then eaten by bigger animals and birds and so on. And what that means is that all the creatures in the aquatic food chain have these fatty acids in them.</p>
Montage chemical molecule and rock pool with women gathering super 8'	<p>20:47 Narrator: According to this idea, our fish eating habits started around 3 million years ago - just when our brains began to grow. But is there any evidence for this?</p>
Leslie Aiello	<p>20:57 Leslie Aiello sync At this early time period there's no tangible evidence in the archaeological sites that our early ancestors were exploiting aquatic resources.</p>
Tilt up from sea to Parkington Izerfontein site	<p>21:07 Narrator: In fact, it's another two and a half million years before any firm evidence comes to light and by then we're fully modern humans.</p>

<p>Tilt from shell in hand to Parkington's face</p> <p>Pan along shells at Parkington's site.</p>	<p>21:17</p> <p>At archaeological sites in South Africa, John Parkington has found overwhelming evidence linking the earliest modern human remains to large deposits of shellfish known as middens.</p>
<p>V/O shells pan</p>	<p>21:29</p> <p>Parkington V/O:</p> <p>We're about a hundred kilometres north of Cape Town on the Atlantic coast of the cape.</p>
<p>John Parkington</p> <p>Title: Prof. John Parkington</p> <p>Archaeologist, University of Cape Town</p>	<p>21:34</p> <p>John Parkington sync: I think we are looking at the remains of a small shelter in which people sheltered whilst they consumed shellfish, other marine foods and terrestrial foods that they were gathering in the vicinity of this place.</p>
	<p>21:50</p> <p>John Parkington sync: Some of the earliest shell middens that we know of anywhere in the world come from this part of south west Africa and also in and associated with some of those shellfish are some of the earliest modern human remains.</p>
<p>'Modern human' skull mix shell pan superimposed</p>	<p>22:22</p> <p>John Parkington V/O sync: It looks as though the cape here was certainly part of the area in which anatomically modern people evolved. People who's cranial remains were indistinguishable from ours. Skeletally they were like us. What this implies is that all people are descended from these populations. And if those populations are Africans which they appear to have been then in a sense we're all Africans.</p>
<p>Super 8' surf</p>	<p>22:52</p> <p>Narrator: These earliest humans</p>

	certainly had a taste for fish. But that wouldn't be enough to give them bigger brains.
Horrobin	22:59 Horrobin sync: If you take these fatty acids and feed them to a rat or a mouse or a human, you don't just get a bigger brain by feeding the fatty acids. You have to have a mechanism for getting the fatty acids from the food into the brain
Parkington	23:17 Parkington sync: The conventional view has been that when people became modern they started to collect shellfish and leave them in nice heaps. But it seems to me that it might have been the other way round. That it was in fact the collection of these marine foods that allowed them to get bigger brains and become modern.
Trowels digging	23:38 Narrator: Neuroscientists like David Horrobin support Parkington's idea. All he needs now, is proof.
FCO archive of brain scans	23:49 Narrator: Genetic mutation must have triggered a mechanism to transport the fatty acids from fish into our brains. David Horrobin thinks he's found this crucial gene - in a surprising place.
David Horrobin Try using slow shutter speed shots of BG of interview	24:04 David Horrobin sync: Initially, the schizophrenia research was nothing to do with this at all, but it was only as we unravelled the bio-chemistry of schizophrenia that we began to realise how closely involved it was with these water based fatty acids. And then WHO did a very large study on schizophrenia, which said, my god

	<p>this is a very strange disease. This is the only disease we know of which is found to exactly the same degree in all the races. And therefore must have been present before the races separated.</p> <p>And that began to ring bells 'cause that was a pretty profound observation.</p>
<p>Slow shutter speed shots of people? 'modern human' skull superimposed.</p>	<p>24:45 Narrator: If schizophrenia has always been with us, some of John Parkington's earliest humans must have suffered from it. David Horrobin believes the gene for schizophrenia is also the gene, which made us intelligent.</p>
<p>David Horrobin</p>	<p>25:01 David Horrobin sync: What we've been able to show from our own research is that these fatty acid metabolising enzymes, play an absolutely critical role in the development of schizophrenia</p>
<p>David Horrobin</p>	<p>25:16 If you are schizophrenic there will be many other members of your family who are very clever. Einstein's son was schizophrenic, lots of Bertrand Russell's family are schizophrenic. James Joyce's daughter was schizophrenic, and the children of at least five recent bio-medical science Nobel Prize winners are schizophrenic.</p>
<p>David Horrobin</p>	<p>25:37 So I personally think that the development of the genetic basis for schizophrenia which brought schizophrenia into humanity, is actually also what made us human.</p>
<p>DV zoom out from figures in landscape</p>	<p>25:52 Narrator: But this theory's opponents aren't so sure.</p>

Conclusion

Wheeler	<p>25:56 Peter Wheeler sync: Everyone wants our ancestry to be special in some ways, and the aquatic ape provides that yearning for a special ancestry, well unfortunately when you dig beneath the surfaces of many of these correlations they just simply don't hold up.</p>
Aiello	<p>26:08 Leslie Aiello sync: Until there is actual evidence to support a serious aquatic involvement, I don't think that we're going to be able to say that that's at all a contender for a theory for human evolution.</p>
Horrobin	<p>26:22 I think absolutely, it is going to be increasingly recognised that a water phase of our existence played a major role in evolution.</p>
Tobias	<p>26:33 If we were living on the savannah we would have been the most profligate urinators in the whole of Africa.</p>
	<p>26:50 Narrator: We've always needed lots of drinking water, we still settle near fresh water and fish remains the best brain food.</p> <p>But until many more relics of human prehistory are unearthed, no one will be able to provide the final answer. Still, radical ideas like the aquatic ape theory encourage the ebb and flow of argument, and draw us ever nearer to the truth about the very beginnings of human life on earth.</p>
Fish shots End credits	

Information to put on clock:
Information, Foreign & Commonwealth Office
The Edge
Water Babies
4 X 3

Credits

Narrator

Suzanne Bonetti

Thanks to

Laura Sevenus
Johannesburg Zoo

Archive Film

BBC Television

Vernon Reynolds

Cast

Thamganqa Makubalo
Avuyile Koli
Peter Koli
Nombelo Kule

Camera

Brand Jordaan
Luke Hallam
David Flett

Underwater Camera

Charles Maxwell

Sound Recordist

Tony Bensusan
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Simon Frost

Producer

Deborah Chatterjee

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Fiona Connelly

Alison Field

Editor

Anna Turville

Director

Sabine Pusch

(Animated logo with plain white background)

Series Editor

Ron Blythe

MM1

Water Babies – Music Cue Sheet

Time Code	Music Title	Composer/Arranger	Publisher	Performer	Record Label	Use	Duration
00'24	Total Movie Tk 5 "Wildfire"	Anthony Phillips	BMG Production Music		Atmosphere Music Ltd	F	1'20
01'56	World Muisic Tk 27 "Midday Sun"	Andy Clark	KPM Music		KPM	F	0'13
02'30	Cheesy Listening Tk 2 "Skin Eight"	H Blake	JW Media Music Ltd		JW	F	0'07
05'25	World Muisic Tk 27 "Midday Sun"	Andy Clark	KPM Music		KPM	F	0'45
07'27	World Muisic Tk 27 "Midday Sun"	Andy Clark	KPM Music		KPM	F	0'16
10'28	Total Movie Tk 5 "Wildfire"	Anthony Phillips	BMG Production Music		Atmosphere Music Ltd	F	0'29
11'08	Nature Studies 3 Tk 10 "Dramatic Race"	J Fox M Prindy	Sonoton Recorded Music Library		Sonoton	F	0'46
12'11	Nature Studies 3 Tk 10	J Fox M Prindy	Sonoton Recorded Music Library		Sonoton	F	0'14

Water Babies – Music Cue Sheet

	“Dramatic Race”						
12’42	Nature Studies 9 Tk 27 “Gulf Stream”	J Fiddy	Sonoton Recorded Music Library	Wesley Plass & Hannes Treiber	Sonoton	F	0’24
16’13	Total Movie Tk 18 “Hackers”	Anthony Phillips	BMG Production Music		Atmosphere Music Ltd	F	1’04
17’45	Total Movie Tk 18 “Hackers”	Anthony Phillips	BMG Production Music		Atmosphere Music Ltd	F	0’08
21’58	Nature Studies 9 Tk 28 “Archeological Sites”	Wesley Plass & Hannes Treiber	Sonoton Recorded Music Library	Wesley Plass & Hannes Treiber	Sonoton	F	0’51
23’32	Nature Studies 9 Tk 28 “Archeological Sites”	Wesley Plass & Hannes Treiber	Sonoton Recorded Music Library	Wesley Plass & Hannes Treiber	Sonoton	F	0’14
23’49	Total Movie Tk 18 “Hackers”	Anthony Phillips	BMG Production Music		Atmosphere Music Ltd	F	0’17
24’43	Total Movie Tk 18 “Hackers”	Anthony Phillips	BMG Production Music		Atmosphere Music Ltd	F	0’19
25’36	Total Movie	Anthony Phillips	BMG		Atmosphere Music	F	0’05

Water Babies – Music Cue Sheet

	Tk 18 "Hackers"		Production Music		Ltd		
25'46	Total Movie Tk 18 "Hackers"	Anthony Phillips	BMG Production Music		Atmosphere Music Ltd	F	0'06
26'41	Total Movie Tk 5 "Wildfire"	Anthony Phillips	BMG Production Music		Atmosphere Music Ltd	F	1'03