

The portrayal of human-wildlife interactions in the print media

Daniel Lunney and Chris Moon

Department of Environment and Climate Change NSW PO Box 1967 Hurstville NSW 2220
dan.lunney@environment.nsw.gov.au

ABSTRACT

“In the end Steve Irwin got too close” (*Sydney Morning Herald* 5/9/06). Steve Irwin’s untimely death generated an instantaneous and massive response by the media. The cause of his death - a stingray barb - highlights a vital part of the topic of how close we should be to wildlife for our own safety, and for the welfare of the wildlife. As working zoologists, we asked: “To what extent does the media’s portrayal of human-wildlife interaction define or obscure the contentious issues in wildlife management?” We examined 287 newspaper articles over one year (7/10/05 to 9/10/06). The journalism was, by and large, informative, readable and entertaining. The usual pattern of reporting was a catchy headline, short story and/or a sensational photo. There is a paradox in our relationship with wildlife - we want to be both close and distant. Media coverage reflects this, presenting wildlife as either dangerous or loveable, depending on the reporter’s ‘angle’. Safeguarding the future of our wildlife will need much more than a headline with a pun and an engaging photo of a charismatic creature. In its presentation of wildlife, the media plays a powerful role that will either further its conservation or leave it as a neglected element of our heritage. From our analysis, we argue that scientists and the media can be more profitably engaged, but ultimately the conservation of our fauna will depend on well-supported and diverse teams of scientists and wildlife managers that operate on sound ecological principles, not media precepts.

Key words: Steve Irwin, urban wildlife, pest species, zoos, wildlife tourism, wildlife management, science in the media.

Introduction

When the council of the Royal Zoological Society of NSW decided on the program title “Too close for comfort” in June 2006, there was some concern that this issue was not clearly in the public’s eye as a zoological topic. Steve Irwin’s untimely death on 4th September 2006 generated an instantaneous and massive response by the media. “*In the end Steve Irwin got too close*” was the opening sentence in the lead, front page piece by Robert Wainright and Jordan Baker in the *Sydney Morning Herald* of 5/9/06, under the headline *Farewell to the Croc Hunter*. A convergence of zoological concerns was aired in the ensuing discussion, and the response threw into sharp relief some of the essential issues in how the media deals with the subject of human-wildlife interactions. Steve Irwin was a larger than life figure, and the cause of his death - a stingray barb - highlights a vital part of that topic, namely, how close we should be to wildlife for our own safety, and for the welfare of the wildlife. Our drafting of this paper went from attempting to extract a coherent story from the media to a much sharper examination, commenting on what was presented boldly, what was implied and what was omitted.

We share our space with wildlife, but it can get uncomfortable for both parties. As working zoologists, we asked: “To what extent does the media’s portrayal of human-wildlife interaction define or obscure the contentious issues in wildlife management?” We examined *The Sydney Morning Herald* (SMH) and, to a lesser extent, its sister Fairfax publication *The Sun Herald* (SH) over the 12 months preceding this forum (7/10/05 to 9/10/06), and obtained 287 articles relevant to the topic “Too close for comfort”. We found major themes, magnificent photos and a string of witty headlines, but in a piecemeal and often superficial approach to the important issues of biodiversity conservation in Australia.

A complete study of media treatment of wildlife issues would be vast, and fraught with difficulty if retrospective because of the transient nature of electronic media coverage. Our aim was not to compare different strands of media, or even to compare newspapers seeking contrasts of content and styles, but to follow the reporting of ideas in this field, exploring the way media shapes community perceptions. We selected newspapers because they contain reflective pieces, juxtapose photos with text, and one can analyse the text in detail. In addition, there is the possibility of keeping a long and unbroken series, not possible with TV clips. We selected the Fairfax press for analysis because of its wide coverage of issues, both local and international, its recognition of a subscriber base interested in conservation, and because both authors have been long-term subscribers to the *Sydney Morning Herald*. If any readers feel that the Fairfax press is somehow atypical of the broader media in its treatment of wildlife stories, we encourage you to delve into the subject and publish your findings, as we have.

Steve Irwin’s death - a media feeding frenzy

The avalanche of articles triggered by Steve Irwin’s death (86 of 287 within the study period) provided a convenient lead into this coverage and its themes. By Saturday 9th September 2006, the SHM had recorded its biggest ever hit rate on its web site (1 million hits), and there were 54 articles, 30 letters to the editor and 2 editorials on Steve Irwin’s death, and its aftermath and ramifications, between 5th and 30th September. This was a colossal response. We can ask a few questions. If Steve Irwin had died in any other fashion, i.e. not connected to wildlife, would the outpourings of grief have been the same? It certainly would have turned on the

plight of his family - the two young children, their mother, and Steve Irwin's dad - as well as the loss of a major TV personality and tourist magnet. This response would have been vast by any measure, but it would have had a different complexion. Peter Brock's equally tragic death allows us to consider this question. Like Steve Irwin's death, Brock's was front page, headline material, e.g. SMH 9/9/06. Brock, the racing driver, died in a car crash during a rally. The editorial in the SMH of that morning (*Danger men: Fate claims Brock and Irwin*) made a comparison. "We are shocked," said the editorial, "but not entirely surprised; both men lived with danger; it was their profession and their passion." "Both Irwin and Brock will be remembered for more than their illustrious lives: Irwin for his work for environment, Brock for helping any number of good causes through the Peter Brock Foundation." "Australians can celebrate two lives well lived - and too soon taken from us."

Irwin's trademark was his position at the human-animal interface, the zone where our discomfort levels dissuade ordinary mortals from venturing. He showed us the paradox in our relationship with wildlife - we want to be both close and distant. Our vicarious experience of dangerous yet awesome wildlife made Irwin always newsworthy (especially abroad). But how does the treatment of Irwin's death compare to SMH's usual attention to the subject of this RZS Forum - human-wildlife interactions?

The picture tells the story

Media treatment of wildlife issues is often hard to categorise. In a sense, the print media approaches the subject matter in two ways - look for stories on subjects in which the public has a known interest, or take an available story and present it in a way (angle) which catches the readers' attention. Human-wildlife interaction is ideal for this treatment, especially if a good photo is available. Of the 287 articles, 116 were accompanied by one or more photos. However, Fairfax website archives articles (46), letters to the editor (53) and editorials (2) do not carry photos, so of the remaining 186 that made it into print, the 116 with photos represents 62%.

Eight of these contained that most photogenic of subjects - baby animals, viz: cheetah cub (1/12/05); gorilla holding kitten (3/12/05); mother snow leopard with two cubs at Taronga (21/12/05); tadpoles due for release (23/12/05); sleeping baby wombat (25/3/06); hunter clubbing seal pup (25/3/06); penguin chick (from movie) (30/3/06), and two white lion cubs (30/9/06). Half of the photos (66) contained humans, and 30 of these showed people and animals in the same photo - which is a de facto portrait of the human-wildlife comfort zone as represented by the media. In summary, these contained: crowd with lion on glass roof in zoo; man feeding birds in backyard; dead gull, man, and toxic lagoon; diver and giant groper; kangaroo being caught in theme park; man holding cheetah cub; men hosing elephants; hunter/boat/dead seal; woman with python; David Attenborough with mayfly; man riding ostrich on African farm; zookeeper with panda; herpetologist with endangered tadpoles; ibis and child in park; bluebottles and surfers; surfers near shark-netters; palaeontologist digging up marsupial lion; whale rescue in London; Greenpeace activist and harpoon line; frog and herpetologist; shark and diver in aquarium; hunter clubbing harp seal pup; dolphins and surfer ride same wave; girl viewing jellyfish in aquarium; Steve Irwin and tortoise; Irwin with croc; Irwin with croc/crayfish; Irwin with crocs/goanna/seal; Irwin with croc, and Irwin with snake.

Marine wildlife

There were 77 articles on marine topics, including 26 on sharks and 28 on cetaceans, with the rest made up of seal killing (6), jellyfish (3), marine conservation (3), New Zealand fur seals (2), turtles (2), penguins (2), bluebottles, marlin, seabirds, dead groper and flatworm (1 each). It seems apparent from the analysis of press coverage of this theme that we are much less comfortable in the marine environment than on *terra firma*. We love marine mammals, but the headlines tell us the sea is full of things which may harm us - e.g. sharks, box jellyfish, bluebottles

Making waves while the sun shines



A surfer shares a wave with dolphins at Crescent Head. This photo epitomises our fantasies about harmonious closeness to wildlife: not just physical closeness, but a spiritual connection (without danger or discomfort). Sharing a wave provides a recreational bond between man and beast. Is it too close for the dolphin? According to the SMH (26/11/05) "Swimming with dolphins gives your life purpose" (helps treat human depression), but Dolphin lovers may harm animals they flock to see ("Tourists affect dolphin behaviour") (Sun Herald 1/1/06).

Photo, A. Wylie/Fairfax photos, SMH 11/8/06

Beachgoers scream blue murder at fish killing



A diver hand feeds Bluey the groper at Clovelly. Humans and wildlife can be both close and comfortable, well, at least till some divers killed the trusting fish. The accompanying article expressed the outrage felt by locals at the senseless killing of this local favourite.

Photo, J. Alcock/Fairfax photos, SMH 22/11/05

and flatworms, but also whales (*Whale capsizes boat - two fishermen drown off Woolgoolga, 31/7/06*) and marlin (*Marlin snares angler, hook, line and chest - a marlin leapt into a fishing boat near Bermuda and speared a fisherman in the chest, 5/8/06*). However, when spearfishers killed a popular blue groper at Clovelly (22/11/05) the headline was *Beachgoers scream blue murder at fish killing*.

Sharks are an easy subject - readers' comfort zones are well defined and easy to manipulate. In the 3 months prior to the headline *Woman, 21, dies in shark attack* (on North Stradbroke Island) (8/1/06), there were five articles about sharks, headlined: *Great White shark sets trans-oceanic swimming record* (7/10/05); *Illegal [Indonesian] shark hunters use hit and run tactics* (29/10/05); *Shark spotted again* (9/12/05); *Defying death in troubled waters* (24/12/05), and *Sharks close beaches* (28/12/05). Following the attack, there were a further 14 articles in 9 days, with headlines such as *Everyone out: shark panic at [Bronte] beach* (11/1/06), *Shark alarm: not enough money to patrol beaches* (10/1/06), *What lies beneath?* (14/1/06) and *Unsung heroes of the shark patrol* (14/1/06) indicating the tone of treatment of this subject, although Julia Baird wrote an opinion piece on alarmism headlined *Just when you think*

it is unsafe to go into the water... (12/1/06). The media is widening our comfort distance with sharks, even though there are only 1.1 shark deaths/year in Australia, compared to 200 drownings (*Blood in the water, 12/1/06*).

The other large marine area of interest was cetaceans (28 articles), principally reported through the whaling debate (20), but including when the US navy was forced to stop using whale-damaging sonar near Hawaii (8/7/06), the attempted rescue of a pilot whale in the Thames River, London (23/1/06), and some warm/fuzzy dolphin articles (but including *Whale capsizes boat*).

Urban wildlife

There were 18 articles and 14 letters to the editor about urban wildlife over the year. Articles dealt with the perils of living with possums (2), controls on dogs (1) and cats (1), snakes (2), man dragged dead possum behind car at Narrabeen (2), and 1 each of nuisance ibis, Indian mynas, bird feeding and annoyance in the suburbs, wildlife in Hyde Park, chips give gulls health problems, New Zealand fur seal on park bench at Curl Curl, emus in Iluka in coastal north-eastern NSW, funnel-webs, annoying beachside seals in California, and kangaroos in south coast villages.



Kiwi visitor sets a new benchmark

NZ fur seal on park bench at Curl Curl. We share our space with wildlife, including our parks. The 'visitor' from across the Tasman could not look more comfortable (to us).

Photo, R. Pearce/Fairfax photos, SMH 22/7/06

However, it is the delightful strand of letters to the editor about backyard wildlife, over the full year, that epitomises the love-hate relationship we have with our wildlife. Beginning in reference to an earlier letter (2/12/05), we have an anti-koel letter (28/11/05) which exhorts pythons to eat them, followed by: a pro-koel (and cicada) letter (2/12/05), and later one about the first koel of the summer (19/8/06); 3 letters about how kookaburras, cockatoos and other birds damage property (24/1/06); "I can't remember the last time I saw a butterfly" in the suburbs (11/9/06); "Not only butterflies - where have all the ladybirds gone?" (12/9/06); "Never mind butterflies, where are all the Bogong moths?" (14/9/06); "I haven't seen a rosella or king parrot for a long time, let alone a 'nice' insect" (20/9/06); [the first] cuckoo "wakes me at 5.33 am" (21/9/06); "Forget cuckoos at 5.33 am, in Orange the birds wake you from 4.30 am. Roll on daylight saving" (22/9/06); early blackbirds make a mess (23/9/06), and finally a letter lamenting the shortage of pet phasmids ("more popular than iPods") because of cyclone Larry (9/10/06).

Zoos

Zoos can be described as places where humans can get very close to animals with comfort, but only because of barriers which restrict animals' movement. Wildlife in zoos and other theme parks gets a lot of media attention, with 34 articles (not counting any of the articles which dealt with Australia Zoo in the context of Steve Irwin's death). Of the 26 articles with photos, 15 had a major, eye-catching animal photo, equal to or dominating the article (gorilla holding kitten, snow leopard, snow leopard cubs, tiger having dental work, diver with grey nurse shark, sleeping wombat, three of lions including one of white lion cubs, red panda, painted elephant, Thai elephants, caged orang-utans, chimpanzees, and a jellyfish exhibit at a Hong Kong aquarium). Four of these articles made a point about captive breeding and wildlife conservation (e.g. *Exotic extinction looms in zoos*, 5/8/06) - many zoo species are not able to be replaced from the wild (photo

of snow leopard) - but it is hard not to suspect that the photographs were the main reason (if not only reason, for the other 11 articles with eye-catching photos) these stories were published.

The remaining 19 articles included 4 more about welfare and other problems with the importation of 8 elephants from Thailand to Taronga and Melbourne Zoos (e.g. *Skippy for elephants: alarm at wildlife trade*, 18/2/06), 3 about competition for tourists between Taronga and the new Darling Harbour Zoo, 3 about the wedding gift of a pair of Tasmanian devils to the Danish royal couple, 2 about panda captive breeding in China, and single articles about the death of a Galapagos turtle at Australia Zoo, performing orang-utans in Thailand, research into a grey nurse artificial uterus, the theft of a lion cub and some parrots from Gaza zoo (found alive and well, as reported in SMH 18 months later), the theft of a crocodile from Rockhampton zoo, a spider education course at Taronga, and a free Taronga calendar in the Sun Herald.

Native and exotic species coverage

There were 132 articles and letters to the editor generally about native wildlife, though this number contains all articles on the whaling debate (20) and sharks (26), but not the 86 post-death Steve Irwin articles. There were 58 articles about non native species, and 11 articles about both native and exotic fauna.

Threatened species

Twenty eight articles dealt with threatened, rare or extinct species. Those dealing with native species were: frogs (4) (green & golden bell frog 2, corroboree frog 1, wallum froglet 1); Tasmanian devils (4) (Danish transfer 3, poisoning 1); grey nurse sharks (2); quolls as pets (1); thylacine (1); marsupial lion (1); climate change as a threat to wildlife (2), and 5 specific instances of human-induced harm to threatened species: *Wind*

My what big teeth you have



Dreamworld's tiger has root canal treatment. Part of this photo's appeal is that there are many layers of safety between the viewer and the (very dangerous) tiger. These are: that it is a zoo animal, that it is anaesthetised, that experts are in control, and that a photographer has braved the proximity zone to bring us such a close image. The tacit follow-up to the headline - all the better to eat you with (ex Little Red Riding Hood) - reinforces the privileged nature of this image.

Photo, P. Harris/Fairfax photos, SMH 1/2/06

farm kills eagle (8/8/06); cars harming coastal emus at Iluka (10/8/06); *Rare turtle dies of cuts* (from discarded fishing tackle) (17/1/06); Indonesian fishing nets in NE Arnhem Land kill turtles, dugong shark and other fish (23/9/06) and *Rare seals killed* (2 fishermen who shot 40 fur seals arrested in Victoria) (1/9/06). Articles on exotic threatened species included Taronga Zoo (3) (snow leopard, red panda, and difficulty of obtaining rare species for zoos once incumbents die), 3 on panda breeding and release programs in Chinese zoos, 1 on chimpanzees in African coffee plantations, and Polish bison (1).

Dangerous animals

Dangerous wildlife featured prominently in reporting (48 articles, not counting the Steve Irwin articles), with sharks (26), spiders (4), crocodiles (4), snakes (5), box jellyfish (2), bluebottles (1), marsupial lion (1), killer black bear (1), 'creepy crawlies' (1), dingos (1) and, of course, the *Whale capsizes boat* and *Marlin spears fisherman* stories.

Pests

Seventeen articles and letters to the editor presented wildlife as some form of pest (as opposed to 'dangerous'). Native 'pests' as reported were: brush-tailed possums (2); ibis (nuisance to both humans and flying foxes) (2); koels (letter to editor); kookaburras, cockatoos and other birds damage property (3 letters to editor); bluebottles; birds that people feed and which then cause annoyance in urban areas; funnel webs in St Peters house; cuckoos and other birds waking sleepers (2 letters to editor), and seabirds which disrupted a Newcastle ocean rescue. Non native pests were: cats (1); cane toads (1); creepy crawlies sneaking into Australia (1); a defence of foxes (letter to editor); Indian mynas (displace native birds); blackbirds, and annoying sea lions in California. The concept of pest is a powerful one, and it reflects attitudes, danger to humans and economic loss. It is a subject that has been explored by the Royal Zoological Society (Lunney *et al.* 2007), and one that will continue to occupy a prominent position in any debate, particularly in the media, on how we should live with wildlife.

Invertebrates

Humans are particularly intolerant of invertebrates within their comfort zone, and very few species are protected by any laws, even animal welfare laws. The 11 articles about invertebrates over the year covered spiders (4) (arachnophobia 8/1/06, funnel web anti-venom story 1/4/06, funnel web in St Peters house 5/9/06, and new spider species named after church 9/9/06), jellyfish (3) (box jellyfish, killed a girl in Queensland 10/1/06, but they are useful for human eye research 14/1/06, and in aquariums 14/4/06), the value of insects (1) (10/12/05), quarantine 'nasties' (1) (8/1/06), bluebottles (1) (31/1/06), and a new species of flatworm ("*flesh-sucking fiends*") in Botany Bay (1) (21/1/06). However, the tone of the 5 letters to the editor about invertebrates was completely different, with all bemoaning the modern absence of many insects (butterflies, ladybirds, Bogong moths, phasmids and 'nice insects') in urban areas. The evocative phrase, the other

99%, when referring to invertebrates, already shows public opposition by the use of the word "other". It nevertheless well describes how we see and try to live with invertebrates, and value their vital role in ecosystem functioning, a theme explored in Ponder and Lunney (1999).

Useful Wildlife

Wildlife can be portrayed as useful, an area where closeness can give us 'comfort', and a handful of articles referred to this to some extent. Usefulness included: being a gift for the Danish royal family; being eaten (kangaroos 21/10/05, ostriches 14/12/05, sharks 14/1/06); being a potential pet (quolls 11/2/06, reptiles 24/9/06, phasmids 9/10/06); maintaining ecosystems (Attenborough re insects, 10/12/05); providing a natural insect repellent (green tree frogs, 23/2/06); assisting research into human eyes (box jellyfish, 14/1/06), or having milk which is effective against antibiotic-resistant bacteria (tammar wallaby, 24/4/06). The usefulness concept can be explored with much rigour, but there is a resistance in parts of Australian society to using wildlife (Grigg *et al.* 1995; Lunney and Dickman 2002; Archer and Beale 2004). The subject will have to develop further if we are to cope with the biodiversity extinction crisis that is upon us, as was recognised at a conference in Sydney in July 2007 (Lunney 2007).

Too close to wildlife - for their comfort

'Too close for comfort' can be presented as either an animal being too close us, or us being too close for the animal's comfort. In this latter category is a number of articles about harm that humans cause to wildlife, including: *Beachgoers scream blue murder at fish killing* (friendly Clovelly groper speared) (22/11/05); *Devil poisoning fear* (8 Tasmanian devils found dead on property in NW Tasmania) (10/7/06); *Don't cull crocs* (they only kill one person/year, cars/dogs kill many more) (letter 22/7/06); *Wind farm kills eagle* (third in 5 months, in NW Tasmania) (8/8/06); *Rare seals killed* (2 fishermen who shot 40 fur seals arrested in Victoria) (1/9/06); *Chips down for gulls* (junk food gives gulls health problems) (1/4/06); *You've got a hide: authorities truncate art show* (painted elephant in lounge room for LA art show) (20/9/06); *Rare turtle dies of cuts* (from discarded fishing tackle) (17/1/06), and *Shark net call* (remove nets in winter to avoid harm to migrating whales) (29/4/06).

One article in this category was about seabirds, alarmed by the noise of a helicopter, disrupting an ocean rescue near Newcastle (1/9/06), while another, *Swimming with dolphins gives your life porpoise* (26/11/05), touted a treatment for human depression without considering the dolphins' point of view. In the case of *Port authority caught on hop by a little problem* (green and gold bell frog in development battle at Enfield, 7/10/05) it is the ubiquitous issue of development encroaching on habitat which makes things too close for the comfort of wildlife, and this can be extended to the other articles on threatened species and habitat loss.

Road harm to wildlife may also be considered in this category. There were two road related articles: *The pointy end*



The pointy end of car trouble

A bandaged echidna, injured by a car at Cessnock, now recovering at a zoo. This looks like a good news story, but the real issue, not even hinted at, is the devastating record of animals killed or injured by cars on our roads.

Photo, R. Pearce/Fairfax photos, SMH 26/7/06

of car trouble (26/7/06), on an echidna injured at Cessnock, now at a zoo (with a large photo of a bandaged echidna), and one about road risk to emus at Iluka (10/8/06). Road harm to wildlife is a gigantic issue in Australia, with studies confirming thousands of deaths each day, but it gets very little media attention (in our sample, 1 article with a large, eye-catching photo, and another tiny article). Compare this to *Stag knocked down by MTC bus* which received front page coverage, with photo, in *The Hindu* (13/10/03), a national Indian daily, including interviews with the bus driver, witnesses and government officials. Indian roads are very crowded, and buses (in fact most vehicles) are very slow and noisy, so wildlife roadkill is rare and of sufficient concern to make front page national news.

Perhaps the article closest to the theme of this forum is *Whale music rules the deep as navy turns down the sonar* (whale-damaging sonar weapon banned in US/Australian naval exercises in Hawaii, 8/7/06), because it is directly about wildlife comfort and distance, and because a change was forced on the world's most powerful military body, which resisted strenuously, in order to protect wildlife that the world community values.

Our paradoxical relationship with wildlife

Newsworthiness is subjective. The headlines delighted in puns, and one might speculate that if a pun was not forthcoming, the article might not run. The journalism was, by and large, informative, readable and entertaining. The usual pattern of reporting was a catchy headline, short story and/or a sensational photo. In-depth reporting of wildlife themes was rare, and mostly a reaction to events, such as a shark attack. Whaling is newsworthy (when Greenpeace provides the dramatic photos).

Zoos are comfortable places for people to get close to wildlife. Humans are less comfortable around marine organisms than terrestrial, and are intolerant

of invertebrates within their comfort zone. Dangerous animals are always newsworthy.

Urban wildlife issues are fertile ground for letters to the editor. How we share our living space with wildlife is a measure of our comfort boundaries, a theme examined in Lunney and Burgin (2004) in what is now rapidly becoming a recognised discipline. Letters to the editor showed some noticeable differences to articles (former topics chosen by public, latter chosen by journalists). The letters ventured opinions, but strong viewpoints were largely absent from the text of journalistic writing. Articles generally supported a conservation ethos.

A wide range of issues was covered, and coverage was generally even-handed (with the exception of whaling reports - whalers were invariably portrayed as villains and Greenpeace as heroes). If one looks for them, one can find stories on the wildlife theme of 'too close for comfort', but they are not always obvious. Treatment is casual, unconnected, sporadic. Nature is a support theme, not a centrepiece of how we live, our past or our future.

There is a paradox in our relationship with wildlife - we want to be both close and distant. Media coverage reflects this, presenting wildlife as either dangerous or loveable, depending on the reporter's 'angle'. There is necessarily a size bias in reporting of wildlife. Articles about animals of frog size or below numbered 20 - 6 on frogs, 4 on spiders, 3 on jellyfish, 1 each about insects (generally), cicadas, phasmids, creepy-crawlies (quarantine), cane toads, flatworm (new species in Botany Bay), bluebottles and bird eggs (being smuggled).

The need for a catchy angle on each story produced some quirky juxtapositions, such as *Bear goes with floe* (helicopter search for brown bear stranded on ice in Baltic) (14/4/06), then *Fears for floating bear* (helicopter can't locate bear) and *Hunt for killer black bear* (bear kills girl in Tennessee campground) (both 17/4/06). A second such trio was *Croc theft charges* (two women charged

with stealing 1.2 m crocodile from Rockhampton Zoo) (30/3/06), then *Girl feared dead after [Arnhem Land] crocodile attack* (10/7/06) and *Girl's remains found in crocodile in NT* (crocodile killed) (31/7/06). Japanese whalers blasted a whale-riding Greenpeace activist with a water cannon (SH, 01/1/06), but six months later the same device was used to disperse 'annoying' sea lions on the Californian coast (10/6/06). The above exemplify our ambiguous relationship with wildlife - love and fascination vie with dislike, fear and excitement as we approach the edges of our comfort zones.

The response of humans to an animal is a primary guide to how to categorize those perceptions, such as those animals with which we can live in harmony (dolphins), wildlife as pests (ibis), or wildlife as dangerous (dingoes, bluebottles). Wanton cruelty or senseless killing is presented as an appalling act, e.g. blue groper killing, whereas acts of kindness to individual animals are applauded, e.g. the road-injured echidna. Our visual response, e.g. tiger with dental surgery, or the visual image that the words evoke, e.g. brown bear stranded on an ice floe, is a powerful element in defining how we shall respond.

Research was raised as a contentious issue in relation to the perceived fraud of the Japanese killing of whales for "research". It can also be said that science itself is of marginal interest to the media. Most mention of science or scientists can be described as generic, such as: scientists track great white shark, scientists release captive bred frogs, or scientific whaling decried as sham. Individuals may be named, but they were not the focus of any articles.

The Steve Irwin phenomenon

Steve Irwin's death, and his contribution to zoos, conservation and environmental education, eclipsed reporting of all other wildlife issues. Comments on the Steve Irwin phenomenon were noticeably different, with even the editorials commenting that Irwin's conservation endeavours presented a paradox. Therefore this became a rich ground for exploring the more difficult issues in how we should interact with wildlife. Germaine Greer was hostile to Irwin's handling of wildlife, and Clive Hamilton also presented strong criticisms, whereas David Suzuki was appreciative of Irwin's efforts.

In their front page piece *Big boots to fill for Irwin's little girl* (9/9/06), Elizabeth Sexton and Kate McClymont cover some of the details of Steve Irwin's enterprises. He ran a zoo, Australia Zoo, with 800,000 visitors per year, and he made films that had a huge international profile, especially his Crocodile Hunter series. Sexton and McClymont reported that Irwin and his wife also bought parcels of undeveloped land for conservation of endangered species, and invested in animal welfare projects. This list identifies topics that have tested many people in the conservation and animal welfare world. Zoos do not enjoy full public support, private enterprise being the saviour for fauna has its supporters and detractors, and the way one actually handles wildlife is a subject of rapidly changing public interest. Before Irwin's death it was worthy of a theme of *Too close for comfort. Contentious issues in human wildlife encounters* (the title of the 2006

Royal Zoological Society forum and a book to follow). The advertisements for the forum went out in early August 2006, and the theme of this piece has not changed. However, it has been given a sharp edge, and we can all now appreciate that there is a suite of related matters that are hard to disentangle. Germaine Greer attacked Irwin (SMH 6/9/06 front page, and page 7 under the heading *The animal world got its revenge: Germaine Greer*), but the widespread condemnation of her views bears testimony to the complexity and interrelatedness of the issues.

Greer's primary point was elevated to the front page: "*There was no habitat, no matter how fragile or finely balanced, that Irwin hesitated to barge into. There was not an animal that he was not prepared to manhandle. Every creature that he brandished at the camera was in distress.*" (SMH 6/9/06). By the following day, there was a string of letters under the heading *Now not the time to criticise Irwin*. That does not imply that it was wrong to comment on what he stood for, but that now was not the time. Indeed, it is a common custom in Australia not to criticise the dead, unless one criticises political or historically important figures.

The SMH, of course, did make much of the matter. The cartoon by Wilcox (7/9/06) carried a sketch of a couple, in 'Islamic dress', with a baby, watching TV. The mother, holding the baby, is making the remark, "*Maybe you have to wrestle crocodiles to fit in ...*". Irwin's wide appeal is more complex than just the wildlife issues involved, but there is a good reason to examine the ways in which wildlife issues are presented by the media, even if the route is circuitous, such as the remark that wrestling crocodiles is presented, ironically one presumes, as an 'Australian' thing to do.

On the same day in the SMH are two articles headlined: *No fuss, says dad* [Bob Irwin], *he was an ordinary bloke*, and *Too hot to handle: climate of change endangering 1683 natives*, a well-illustrated piece by environment reporter Wendy Frew. In these headlines we can discern a common cause with Steve Irwin's death, through the concept of handling something, and the use of the word 'too'. By putting climate change in the Irwin style, a dangerous problem confronted by ordinary people becomes a topic of immediate relevance.

Consider the witty headline in the SMH: *Storm over climate strip show* (8/9/06). The reporter, Elicia Murray, said that "*Outraged scientists stormed out of a government-sponsored climate change conference in Canberra after strippers booked as entertainment left them all hot and bothered.*" Murray also reported that "*The [federal] Environment Minister, Senator Ian Campbell, said he was 'appalled' and he directed his department to withdraw its \$3000 sponsorship.*" By the following day (SMH 9-10 September 2006) there was a heading in the letters section, *Get serious on climate change*. The first letter, by Peter Tuft, opened with, "*We're doomed, all doomed*", then concluded with "*What hope is there when even the better media just don't get it on climate change.*" There is a number of views on this matter, but just on the information given above, it means that something as important as climate change will get little coverage without a media angle (in this instance, a scandal). There is a case for saying that to make climate change a tangible issue for most people, a popular champion,

such as a Steve Irwin, is needed. Careful scientists and concerned politicians are not enough. Al Gore has filled this role, and we note that climate change now dominates environmental (and to a large extent political and economic) reporting in the SMH.

Another Irwin point that attracts our attention is reptiles. Consider the headline *Friends and family keep reptiles of the press at bay* (8/9/06). Reporter Justin Norrie writes: “Steve Irwin’s empire was built on television. It is not surprising then that his family and colleagues have been able to manage the media so effectively this week.” One can presume that headline writers are keenly aware of the power of words, so the choice of ‘reptiles of the press’ was not just by chance. As the Irwin family could handle all classes of reptiles, the ‘reptiles of the press’ was just another group. Nice point, but it does have its dark side. Reptiles of the press is a cliché, with the word ‘reptile’ here meaning “grovelling, mean or malignant”, as defined in the Macquarie Dictionary (3rd edition) - that is, a despicable person. So, the headline perpetuates this awful image of reptiles. No doubt Irwin played to it, he knew it well, yet it can be argued that by engaging with reptiles, he made them just as Australian as himself. He helped repudiate the view that they are terrible creatures to be loathed - respected, yes, but not hated. From one point of view, one of Steve Irwin’s enduring legacies may be the elevation of reptiles to a status that brings them on a par with native mammals and birds. That, from a zoological conservationist’s point of view, has much to commend it. In doing so, he has followed Harry Butler’s television series of the late 1970s and early 1980s. He made reptiles both legitimate Australians and interesting animals. The question remains as to whether the price was too high in the way the animals were presented. There are strong views at this point.

Clive Hamilton’s piece on the SMH Comment page (8/9/06) raises yet more issues and contrasting opinions. The highlighted sentence was: “It’s hard to see how presenting a sort of freak show can cultivate a conservation ethic.” The comparison was with David Attenborough. Attenborough is brilliant, and he does have a highly personal style. Irwin had his own style, and he may well not have succeeded if he had tried to emulate Attenborough. It was not his personality to hang back and whisper – nor, it seems, his view of what it is to be Australian. That Irwin found a huge audience is undeniable. To the extent that he found a different audience to Attenborough is a measure of the people that Attenborough did not reach. If public support for wildlife conservation in all its diversity is to be cultivated, then there exists a case for tolerating a diversity of presenters. Our tolerance of this diversity may be one of the keys to how we are to conserve all our wildlife. However, this point does not come to grips with the issue of what is ‘too close’, what is respect, and how one introduces animals to the public in a fashion that leaves people as supporters of the need to conserve all wildlife. This is where both Hamilton and Greer make strong points. The issue remains alive, and keeps a focus on zoos (also covered in this forum) and the human desire to drive cars and trucks without due regard to the toll of animals left dead and injured on our roads. We need

both an Irwin and an Attenborough of our roads, but that topic is too grim, and too hectoring, to provide a basis for a major television program.

Hamilton (8/9/06) makes another telling point about Irwin’s free enterprise approach to conserving nature: “Irwin’s brand of conservation is one that conservative governments feel comfortable with. His emphasis on individual responsibility takes the pressure off government. And no powerful interests are threatened by it. Only public ignorance, solved by watching Irwin’s TV programs, stands in the way of saving animals. This is why Howard has been so full of praise for his work. The Irwin circus distracts us from the otherwise conspicuous failures of environmental policy over the last decade.” Hamilton received support in the letters page (9/9/06) under the heading, *Dont believe it: “While we sympathise with the family of Steve Irwin, please do not overload us with the sanctimonious hype that he was a great conservationist.”* Hamilton’s piece in the comment section of the SMH gives a rare glimpse at an angle that has escaped serious scrutiny in the media, namely the extent to which federal environmental policy has conspicuous failures. No wonder Hamilton’s opening lines carried the following curious sentence: “The extraordinary reaction to Steve Irwin’s death suggests he occupied a special place in the Australian psyche. But it’s not the one his eulogisers imagine.”

The week following Steve Irwin’s death produced a media frenzy that has allowed some minor themes of how we interact with wildlife, or rather, how the media portray how we interact with animals, to be highlighted viz: under the headline *Television ads for quarantine withdrawn* (7/9/06), Emily Dunn wrote: “The Australian Quarantine and Inspection Service has pulled its television advertisements and promotional material featuring Steve Irwin. A spokesman for the Service, Carson Craigh, said the “Quarantine matters” videos, showing an enthusiastic Irwin explaining potential environmental hazards of imported flora and fauna, would no longer be screened on television or on in-bound flights.” Other elements were distilled in the obituary by Malcolm Brown and Wendy Anderson (11/9/06), under the headline *Wildlife warrior took his passion to the world*. They noted that “If he did offend some traditional naturalists - and critics like Germaine Greer - he brought an awareness of wildlife to living rooms throughout the world and imbued in his listeners a respect for all creatures, even those they had been taught to revile.” They cited, as evidence for this view, the environmentalist Dr David Suzuki, “Most academic environmentalists speak as if they have a pole up their behind but Steve Irwin vulgarised environmental issues in the best possible way and so popularised them to the extreme. The environmental world benefited enormously from Steve Irwin because he not only identified threatened species but hugged and kissed them, making the viewers want to save them as well.” The obituary writers then noted that those who preferred the academic refinements of David Attenborough hardly warmed to Irwin, and his detractors had plenty to work on. The case cited was that Irwin took his month old son in one arm and entered a crocodile pen. With the other arm, Irwin dangled the carcass of a chicken over the gaping mouth of a large crocodile. They note that Irwin barely escaped a charge of child endangerment. The closing paragraph is just as

telling: “Irwin remarked with some pride on Enough Rope, Andrew Denton’s ABC TV show, that [his daughter Bindi] had received ‘her first snakebite.’” Here can be discerned sharp contrasts as to whether Steve Irwin was acting appropriately in relation to human-wildlife interactions. Our point here is not to make a policy or ethical assessment, but to highlight that the media have been central to the Steve Irwin phenomenon. It follows that if we are, as a society, to construct a code of conduct for such interactions, or make ethical judgments, then the role of the media must be included in any analysis. The obituary writers were mindful of the inherent contradictions in Irwin’s approach to the subject, a fact that they emphasised by contrasting David Suzuki’s views with the way that Steve Irwin managed the human-wildlife encounters of his young children.

One can conclude that the range of issues is bigger than one might have imagined at the beginning of the week, before the Irwin debate exploded; that deep divisions were exposed as to what is the best ethical position and how we see our individual, as well as government, responsibilities on this subject. One can now say that the dilemmas, as well as just the topic, are now in sharper relief.

Acknowledging the paradox that Steve Irwin presented

That Irwin was not consistent in his opinions is not surprising. It is the human condition, and in political terms, the Orwellian phrase ‘double think’ is applicable. Consider the headline on the day when his death was reported: *Farewell to the Croc Hunter*. Yet Steve Irwin opposed the commercial use of wildlife, and crocodiles in particular, through hunting, and spoke out against them being bred in captivity to be killed, skinned and eaten. The basis for this position was that he liked crocodiles. In putting forward his opposition, he was not offering an alternative to how crocodiles might best be conserved in an overall framework, such as a species management plan. Commercial use does offer a legitimate strand in the conservation tool kit (e.g. Webb 1995; www.ncl.org.au/html/wht_lrn_2004_mar02.html; <http://wmi.com.au/crocpark/>; but also contested, e.g. <http://awpc.org.au/oldsite/kangaroos/intrinsic.htm>, accessed 21/9/07). It is one that is consistent with Irwin’s general views, namely that commercial use of wildlife as both zoo animals and as subjects for documentaries in the wild is acceptable. His actions are a statement of his advocacy of this position. His opposition, or his silence, to other commercial uses of crocodiles can be seen as inconsistent.

The very fact that Irwin ran a zoo becomes an endorsement of that philosophy, and its educational value in particular. He did endorse research on crocodiles, and radio-tracking them was one of his projects. From a conservation perspective, that is a major plus because of the need for Animal Ethics Committees to be alert to public opinion on the handling of animals in research and the use of devices to track animals.

On related subjects, such as whether native animals, mammals in particular, could be kept as pets, he was silent. There is a case that keeping native animals as pets

is a plus for conservation (Archer 2002; Archer and Beale 2004; Cheng 2007), but it has its detractors (e.g. Viggers and Lindenmayer 2002). Steve Irwin was photographed hugging even the most deadly of animals, so presumably he was endorsing that level of closeness, and he kept them in captivity, but the next step was not taken. Even on the subjects where he was in the spotlight, there was little guidance as to how close should we come to our wildlife. To that extent Irwin was an ambiguous role model for how we should run and regulate wildlife tourism in Australia, and indeed manage all our wildlife.

Irwin was so prominent that we are obliged to comment on his style. The SMH editorial on 6/9/06 put it this way: “As we celebrate the life of Irwin, cut off in his prime, we should also acknowledge that the showmanship which was his trademark represents a paradox. The wild nature which he put on display is no longer wild at all: it is but a sadly fenced remnant of once savage nature which humans have completely and utterly conquered.” He left such questions unanswered, yet his very actions provoked them. Commentary, research and a regular check on the ethical basis for our actions have been left for others. We have chanced our arm in that field of commentary on Steve Irwin.

Academic reflections on the issue of science, nature and wildlife in the media

In the preface to their textbook, *Media Studies: the essential introduction*, the authors (Rayner *et al.* 2001) make the point that the subject has been an academic study for over 70 years, but it is only in the last decade that media studies as a subject has really come into the public’s eye. We agree with their view that one of the joys of studying the media is the way in which it can empower students both as consumers and as producers of the media. This paper has been both as consumers and as contributors to the debate. To that we add that there is a case for media studies to be part of a course on conserving wildlife – the two disciplines have common interests, but there are some sharp points of difference. Media studies courses, and indeed journalists or departmental or government media staff, keep their focus on the medium – in the case study here on newspapers. We take up the offer of Rayner *et al.* (2001) for comments on what they recognise as a dynamic subject and put forward the view that media studies can incorporate those who are scientists and conservation biologists, indeed any zoologists, for a short course in presenting their material and point of view. Conversely, the media students would benefit from a more skilful approach to presenting science, and the thorny, socially difficult areas where ethics and social policy interact with science, such as human-wildlife encounters. There are some considered views on this subject that we enjoyed reading.

Headline News, Science Views is the title of a book that contains an eclectic collection of articles that first appeared in the editorial and opinion pages of daily newspapers in the USA (Jarmul 1991). In the foreword, Frank Press, as president of the National Academy of Sciences, says the

book seeks to bridge the gap between science and the rest of society in 75 brief essays by prominent scientists. One of the essays, by zoology professor John J. Magnuson, was about saving sea turtles and, like the other essays, it was well written. Its opening line was engaging: “*Long before there were Teenage Mutant Ninja Turtles, our nation’s southern coastal waters abounded with the real thing.*” In contrast, its closing was grim: “*The shrimping industry must begin using TEDs [Turtle excluder devices] routinely, or these timeless creatures will face extinction.*” This book was a neat initiative and, as we looked at the material, we realised that, in Australia, it has primarily been journalists and anonymous editorial writers that have been presenting wildlife science to the rest of society in the print media.

The various views of how we should manage our interactions with wild animals, including pests, invertebrates and dolphins, have not been written by scientists. It is not that the journalism has not been entertaining, enlightening or factually correct, but the point remains that it has not been scientists presenting their specialist insights into our native fauna, often bringing more into a story than is immediately apparent. In their analysis of wildlife reporting in two daily newspapers, Lunney and Matthews (2003) concluded that there was a select group of journalists who serve zoologists and zoology well, and zoologists wanting to share their research with the general public were given scope beyond the sensational and human interest stories. Notwithstanding, there is a gap here in the reporting world that we need to recognise if we are to run a comprehensive wildlife management program, not just a media-driven program.

In her book *Defending the Little Desert. The rise of ecological consciousness in Australia*, Robin (1998) opened her account with a letter to the editor of the *Melbourne Age*. As an academic historian, Robin had intuitively spotted the connection between the media, the print media in this case, and an attitude to land use that was about to undergo a revolution in Australia. From our viewpoint, there is ample scope for academic historians to examine attitudes to wildlife, and in particular the relationship of the media to wildlife issues.

A step much further from the stories and photos in our newspaper articles is the philosophical significance of our interactions with wildlife. Baggini (2002), a philosopher, wrote a book with the engaging title *Making Sense. Philosophy behind the headlines*. His first example is the debate over genetically modified foods. He states that among the arguments as to safety there is a critical neglect of important philosophical distinctions and questions. He cites, as an example, that most philosophers have agreed that if something is natural, that does not mean that it is right or good. Disease and infant mortality are natural, but no one would suppose that we should rejoice in them. Baggini concludes his book with the view that a philosophical person will understand the news better, and that the news will also be a source of greater understanding for our wider opinions, beliefs and values. The truly philosophical person, he says, treats their own views with as much scepticism as those of other people that they read about. Our scepticism has focussed on the way the media has selected some

matters and not examined others. The human interest element has been paramount, and Steve Irwin’s death seized centre stage in the media, but with little stomach for critical comments. The attack on Germaine Greer shows this point. When we subjected our accumulated material to rational scrutiny, we saw a lack of cohesion in the media in the way that our interactions with wildlife are portrayed. The stand out conclusion here is that if we are to conserve our wildlife, and make rational decisions on how to manage the human-wildlife encounters, then the media is not the best source for drawing up an ethical code, a practical set of actions, nor of exploring whether we, as a society, are doing enough to conserve our wildlife.

In *Science in Public*, Gregory and Miller (1998) note, in their chapter on media issues, that most studies about science and media have been about newspapers and, for practical reasons, most content analysis has been of the text. We are in good company for the practical reasons that newspaper articles are easy to study and codify, and they are clear. They point out that such studies illuminate both the media and the scientific community because the two professional groups are so dissimilar. One observation that emerges is that some scholars often end up attributing characteristics to science-in-the-media that are more characteristics of the media than of the science they see there. They make the observation that it is easy enough to draw conclusions about science in the media from one’s own experience of reading and viewing, but that arriving at a broader picture as a result of rigorous research is more challenging.

Content analysis looks at articles from several perspectives, including the journalist who selected the story, the editor who ran the story and selected the headline, the photographer who chose an angle to illustrate the story, as well as the cultural and professional values of all parties. Gregory and Miller warn scientists who want to be a source of science news that, although it gives them more control over emphasis and tone, the last word always goes to the journalist because science journalism is much more about journalism than it is about science. For the reader who understands these conventions, the insight gives one the chance to see the story behind the headline. Our application here has been to examine the science in the human-wildlife interactions. Let us consider the range of issues in the Irwin matter. In the media response to Irwin’s death, the themes were the tragedy, the great bloke, warrior, hero/idol, larrikin adventurer, superstar, the ordinary bloke, danger, how he died, the zoo’s future viability, his contribution - good and bad, and a discussion of his legacy, mostly hyperbole and praise, with some thoughtful discussion mainly triggered by Germaine Greer, and given extra depth by Clive Hamilton’s commentary. The human interest issues were more important than wildlife conservation. It is a phenomenon that engaged many in the question of how close is ‘too close’ to wildlife. It is now on the national agenda in a way that it had not been previously, and here it was driven by the media. Our content analysis has allowed us to define the contentious issues, and to accept the challenge of looking at the other side - how this presentation may be obscuring the contentious issues.

Defining the contentious issues

Six contemporary contentious issues stand out from the degree of coverage over the past year from 7/10/05 to 9/10/06: danger to people (40 articles, e.g. sharks, spiders, snakes, jellyfish, crocodiles); wildlife exploitation (40 articles, e.g. Japanese whaling, illegal fishing, foreign zoos (orang-utans), seal culling); animal welfare (27 articles, e.g. zoos (Thai elephants), Tasmanian devils to Denmark, blue groper murder, theme parks); endangered wildlife (20 articles, e.g. frogs, pandas, elephants, biodiversity, overfishing); urban and/or annoying wildlife (18 articles, e.g. bluebottles, koels, ibis, possums, noisy and welcome birds), and feral animals (6 articles, e.g. cane toads, Indian Mynas, cats, dogs).

In a witty book entitled *How to become an endangered species*, Hunt (1985) lists seven suggestions to bring success. They are: be furry and aim for the cuddlesome look; have big eyes; try not to scratch, bite or urinate; if in adult form you are repulsive, concentrate media coverage on the young; conversely, if you are a bird of prey, avoid showing your young and avoid being photographed at meal times; if you are fat, or with little piggy eyes, you should concentrate on being remote, mysterious and unapproachable; but if you are fat and good to eat, you have a problem, and you need hope that someone finds that you are worth more alive than dead. The whole business, says Hunt, of interactions with humans is a difficult one. You have to ensure that cuteness outweighs nuisance value. If you are a taipan, toadfish or funnel web spider you really do have a problem, says Hunt. Not only are you cold and slithery so that you have *ugh* potential instead of *aaahh* potential, but the only times you get media coverage are when you have bitten someone. In

her amusing account, extracted from the ABC's Science Show, Kathleen Hunt had arrived at similar conclusions to those that hit us when we examined the print media. We also can note that things do not seem to have changed much in 22 years as to what appeals and what does not, and the conclusion can be drawn that growing concern for conserving our native fauna has not translated into a greater media interest in the range of creatures or their particular circumstances.

Obscuring the contentious issues

Press coverage gave a truncated version of the real, serious issues facing management of wildlife, nor did the media deal effectively with conservation of animal populations, because it is more focussed on individual animals or situations. Conflict with human development was not highlighted, e.g. road deaths, land clearing. There are contentious issues with managing wildlife, such as managing populations of pest species, particularly if they are native, that escape the journalistic spotlight.

The role of zoos was brought into contention with the long-running issue of the importation of the Thai elephants and the role of zoos in a modern society, but the protagonists, or the journalists, or both, remained silent about Steve Irwin's Australia Zoo.

That the future of Australia's wildlife is uncertain is not well portrayed, nor how we might adequately conserve it. There is a rich scientific literature, some strong environmental laws, and a range of professional and conservation societies that focus on this matter, yet one cannot see that depth from the piecemeal reporting in the print media. This is a powerful contrast to politics, sport and the economy. Yet conserving our faunal heritage is part of what the *Sydney*



Clear-felled: two national parks in a year

Homeless pygmy possum in human hand. This photo captured one point of view in the bitter land clearing debate in NSW. The article focused on two extreme positions – an attack on the legal constraints on land clearing at a conference of the National Party, and an attack by the Wilderness Society on those farmers that persist in land clearing and governments who let it happen. The pygmy possum represents the conservation view that much of our future is utterly dependent on our protective action. It is our hand that can either save or extinguish wildlife, hence the photo. This was one of the most substantial articles on a major conservation theme in the last year, with a most apposite photo.

Photo, The Wilderness Society, SMH 20/7/06

Morning Herald acknowledges as being a high priority for Australians, as is evident from the broad range of material on environmental matters that is regularly reported. The conclusion can be drawn that what has been portrayed is clear, interesting and a good start to a more searching set of themes on conserving our natural heritage.

The media, in our print-based, 12-month sample, has portrayed human-wildlife interactions from a number of perspectives that allow us to ask whether this portrayal has come to grips with the central issues in conserving biodiversity. The *Theme Report on Ecosystems and Human Well-being: Biodiversity Synthesis* in the *Millennium Ecosystem Assessment*, World Resources Institute, Washington DC. (2005), concluded with the following statement: “The most important direct drivers of biodiversity loss and ecosystem service changes are habitat change (such as land use changes, physical modification of rivers or water withdrawal from rivers, loss of coral reefs, and damage to sea floors due to trawling), climate change, invasive alien species, overexploitation, and pollution.” It adds, that: “Science can help ensure that decisions are made with the best available information, but ultimately the future of biodiversity will be determined by society.” One can immediately ask: on what does society base its determinations? The answer, to us, is that the media has a crucial role to play at this point. If there is a shortfall in the way the media portrays the issues, or fails to mention them, then the losses of biodiversity, as seen by the scientific community, will continue to mount up unremarked upon by society. In that case, the presentation of both wildlife, and the issues relating to the conservation of biodiversity in the media, are critical subjects if we are to stem the losses in biodiversity.

The portrayal of human-wildlife interactions in the print media is a live issue that became a powerful theme when Steve Irwin was killed on 4/9/06 by a barb from a stingray.

How to manage this matter remains unresolved in the public mind, but at least the subject can now be more seriously broached than before. There is now a growing case for rules and regulations that apply to an increasing number of locations and species, and there will now most likely be a greater willingness on the part of the public to accept new restraints in wildlife tourism for both human safety and the well-being of the wild creatures.

There is a strong case for scientists to become more involved with the media, to present the case for managing threats to biodiversity, e.g. by providing a context for the stories about individual animals, such as the threats to populations of threatened species, or by drawing attention to the causes of a species becoming a ‘pest’, and why control is necessary. The media analysis by Martin (2003) showed how flying-foxes can be demonised by the media. We highlight the need to be critically aware of the different disciplinary interests of scientists and journalists, a point made by Willis (2003; 2007) as a scientist turned journalist.

The more significant point is that the whole matter of how we interact with wildlife is of profound concern for those who are dedicated to conserving our fauna, but such concerns are not an important part of how the print media portrays human interactions with wildlife. Safeguarding the future of our wildlife will need much more than a headline with a pun and an engaging photo of a charismatic creature. The media plays a powerful role in presenting wildlife that will either further its conservation, or leave it as a neglected element of our natural heritage. From our analysis, we argue that scientists and the media can be even more profitably engaged, but ultimately the conservation of our fauna will depend on well-supported and diverse teams of scientists and wildlife managers that operate on sound ecological principles, not media precepts.

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