

# American Conservation Report

1997-98 Arizona, Colorado and Costa Rica

## Preface

*GO BUSH Safaris has a strong interest in the sustainable use of National Parks and other significant natural areas in Australia generally and the improved management of World Heritage sites in particular.*

*GO BUSH Safaris sponsored my family's trip to the United States of America during December, 1997 and January, 1998. The trip had to coincide with both a break in my safari schedule and with school vacation periods. My wife, Sharan Daly, Managing Director of GO BUSH Safaris and our son, Andrés, accompanied me.*

*We paid particular attention to the management of natural areas we visited. We were also most interested as ecotour operators in the interpretation provided at all of the natural sites as well as in the museums we visited.*

*This is a brief report on our observations based mainly on these aspects but also on other issues which are of concern for GO BUSH Safaris .*

*Because of the timing, in the period near Christmas, and the informality of our arrangements, there were no formal pre-arranged meetings prior to our visits nor during them. It was without any formal introductions or prior contacts. The visit was quite spontaneous. There was however, a determined effort to glean as much information as might be relevant and useful.*

*Our report focusses on three principle areas, the Grand Canyon and Mesa Verde National Parks and Rara Avis, and ecotourism resort in the Costa Rican rainforest.*

*On 13 and 14 December, I inspected the Grand Canyon, a World Heritage site, with*

*the view to assessing the management practices with a view to seeing if there were any lessons which could be gleaned from this heavily visited National Park World Heritage Site which had relevance and application to any of Australia's World Heritage sites in general or to Fraser Island in particular.*

*On 15 December we visited two important natural sites managed by the Navajo Native American people. On 16 December we visited the Mesa Verde National Park World Heritage site.*

*In January we pursued a different objective in examining ecotourism in Costa Rica. We decided rather than to visit a number of ventures, to spend some time looking in depth at one operation, a pioneering the field, Rara Avis. It also had significance because it has much relevance to the Cape Tribulation Tropical Research Station in which we have a particular interest.*

*One article we read on a United Airlines magazine, "Hemisphere" quoted renowned Egyptian archeologist:*

*"Many of the world's monuments will be gone in 200 years if we cannot make everyone aware of the threat. The No. 1 challenge is Tourism."*

*From what we saw in our travels, tourism has the potential for both positive and negative impacts. The challenge is to better manage tourism, particularly what is loosely called "ecotourism" better.*

*John Sinclair*

# Grand Canyon National Park

## Background To Visit

On 13 and 14 December, I inspected the Grand Canyon a World Heritage site with the view to assessing the management practices with a view to seeing if there were any lessons which could be gleaned from this heavily visited National Park World Heritage Site which had relevance and application to any of Australia's World Heritage sites in general or to Fraser Island in particular.

Two days were spent in the park and contact was made with a number of National Park Service Staff.

It should be stressed that the use of the National Park is extremely heavily skewed to the summer months from later June to early September. We were there just after the first heavy snow-fall of the season and most of the camp grounds were either abandoned or empty. There was no congestion in the parking areas and it appeared that the level of visitation was less than 20% and more likely 10% of what could be expected to be at the summer daily peak visitation.

## Background Grand Canyon National Park

**Visitation:** The Grand Canyon National Park annually attracts more than 4.5 million visitors since the early 1990s making it the most visited National Park in the Southwest. While we were still in the Southwest we learnt that it had set a new record in 1997 with the number of visitors topping 5 million for the first time. (It had been averaging over 4.5 million for a number of years).

## Some Facts re Grand Canyon Park:

- \* Its 1,900 square miles (about 10 times the area of Fraser Island) lie entirely within the state of Arizona but it is managed entirely by the United States National Park Service.
- \* It includes about 277 miles (about 440 kilometres) of the Colorado River.
- \* The canyon is 4,500 to 5,400 feet below the rim and up to 18 kilometres wide.
- \* It is a World Heritage area.
- \* There is a long relationship between Native Americans and land within the National Park.

- \* A new Management Plan was developed and adopted in 1995.
- \* There is a problem of too much traffic.
- \* Although the land surface as the top of the rim is mainly relatively durable and hard limestone the canyon sides are quite fragile.

There are many other parallels with Fraser Island.

## Some of the issues:

This is not an exclusive set of issues but ones which were raised by the park staff or discussed during our visit or we subsequently read about.

**Water:** The park is located in a desert. All water for the village and park management on the South Rim is piped from a spring on the North Rim and pumped across in a pipeline which crosses the river and which is often out of order. Cost of maintenance and pumping is very expensive.

Notwithstanding this, there are still too many flush toilets in the National Park. While admittedly many use recycled "grey water", there could be more use of composting toilets and more efforts to make visitors conscious of the need for water conservation.

The Parks Service is now worried that the town of Tusayan is drilling into aquifers which will affect the hydrology of the park. Expansion of the Tusayan Village will increase the demand for more water.

**Feeding Wildlife:** There are many problems apparently from feeding animals and in every park there was great emphasis on "Keeping Wildlife Wild".

This theme needs to be a more concerted and standard throughout Australia and not just focussed on particular problems in certain parks such as feeding dingos on Fraser Island.

**Air Pollution:** The issue of air pollution is one which needs more attention in Australia if the experience of the Americans is to be considered. The air pollution which originates in Los Angeles, seriously reduces visibility in the Grand Canyon. Even from Mesa Verde, another 500 kilometres further away we could easily observe the heavy layer of polluted air below the inversion layer in mid winter when air quality is best. In summer it is deplorable and difficult to get a good clear photo in the Grand Canyon where the far side of the canyon is more than 12 kilometres away.

Air pollution is already a problem in at least one Australian World Heritage site, Kakadu where measurable atmospheric fallout from Mt Isa, over 2000 kilometres away but upwind. Mt Isa fallout is also likely to affect the Riversleigh Fossil Site.

Observing the problem in the United States, particularly in the Great Smokies National Park and now the Grand Canyon makes one aware that this is a problem which needs to be actively addressed in Management Plans in Australia and particularly in political decision making. Although Fraser Island is not down-wind of any major air pollution source it is not something which can be ignored entirely.

One of the most effective steps taken to improve air quality in the Grand Canyon was to strike an agreement with the Navajo to reduce the sulphur emissions from one of their power generating plants near the Grand Canyon by more than 95%.

**Traffic:** With over 5 million visitors for 1997 and the affinity for American to let automobiles dictate their whole leisure patterns, traffic control has been a major factor in the Grand Canyon National Park. Traffic jams and queues of cars waiting to get into the Grand Canyon are regular during the peaks of the summer tourist season. This is now being addressed with a combined light rail and bus transit system. (see below)

### Inside The Park

**Village:** The village has grown like Topsy but it dates back more than 80 years and it will be hard to displace. The move now is to locate development outside the park in villages like Tusayan. This is not without its complications for the park itself. All of the resorts, hotels and accommodation within the park are owned by just one operator. El Tovar Hotel, Masik Lodge, Bright Angel Lodge and Cabins, Thunderbird and Katchina Lodges, Mosqui Lodge and the Trailer Village are all operated by Grand Canyon National Park lodges. The same company also operates 11 shopping outlets, the taxi service, garages and auto repair services and 9 different tours including the mule trips and air tours outside the park to places as far away as Monument Valley. This company has an enormous vested interest in ensuring that the National Park Management Plan doesn't impede its continued profitability.

**The Mine:** There was an historic mine within the Grand Canyon National Park. Worse it was not only the richest producer of uranium in the United

States up until it was exhausted in the 1960s but it was within sight of the main tourist village. The only way it has been rendered neutral was when the Parks Service acquired the mine when it became unprofitable.

**The Railway:** Many years ago the Santa Fe Railroad Company constructed a branch line from Williams to the National Park which terminates in the village. This was fine before the advent of the volume of automobiles. However, the railway now has a vested interest in maintaining its continued access almost to the Canyon Rim and in preserving its market share of visitation to the park. It is opposed to plans which may see a light rail divert traffic away from it.

**Visitor Fees:** Congress has recently approved the charging of \$20.00 per vehicle and \$10 per person entering the park on public transportation, foot, bicycle or by river. Until recently this was only \$10.00 per automobile but Congress has allowed a temporary (3 year) increase in access charges with the extra fees going back specifically to the park to improve the quality of management. These are for 7 day passes.

**Hikers** are charged \$20 for a back country permit if they want to hike for more than one day into the canyon. They are also now to be charged a \$4 impact fee per night that they camp in the Canyon.

### Outside the Park

**Kaibab National Forest:** The Kaibab National Forest adjoins much of the Grand Canyon National Park and forms a very important buffer. I tried to gain an information package about how its management and objectives differed from the National Park in Williams. However, because it was a Sunday, the office and information centre wasn't open. I wanted to clarify how there were so many in-holdings in the National Forest, including three villages between Williams and the Grand Canyon. We discovered that there are negotiations going on to exchange some inholdings for Forest land at Tusayan.

**Tusayan:** Just on the southern edge of the approach to the very popular South Rim of the Grand Canyon is the village of Tusayan. This is a new town growing up virtually with minimum development controls, a bit like Orchid Beach. Apart from being the home of the national Geographic's Imax Theatre, it has seven new and very large motels, all of which appear to be

associated with major chains. It is also the location for the Grand Canyon Airport. (see below)

**Land Swaps:** Although surrounded by Kaibab National Forest, which could physically limit its growth, there are seductive plans afoot by enterprising developers to swap thousands of acres of freehold in-holdings elsewhere in the Kaibab National Park for a few precious acres of land adjacent to the existing Tusayan Village.

**Aircraft Over the Canyon:** While we were at Grand Canyon were hundreds of jets which flew over leaving conspicuous vapour trails in the skies above. We did not have much of the intrusion of the light sightseeing aircraft in the canyon referred to below although we did hear and see helicopters.

**Air Quality:** There are major problems with air quality which impedes visibility within the vast vistas of the Grand Canyon. Some effort has been made to address the air pollution generated close to the Grand Canyon but much of the air quality is attributable to the larger cities of California and the smogs generated there.

**Lake Powell:** The construction of a huge dam across the Colorado River upstream of the Grand Canyon has reduced the flow and the regular annual flooding of the canyon itself. The result has been a depletion of beaches on the river banks and a profound change in the character of the river environment at the base of the Canyon. This has been outside the Park but recently Lake Powell was released to renew the Grand Canyon.

## Addressing the Issues

### The Visitor Centre

The existing Visitor Centre is very poor for a park of this size, status and volume of visitation. We later learned that this is because the Visitor Centre was built in the 1960s and that it is soon to be replaced. The recent (but temporary) increase in Visitor Fees now makes planning for replacement of the Visitor Centre possible.

The new Visitor Centre is to be at Mather (pronounced Mat-Her) Point. This is the first encounter with the rim of the Grand Canyon that most visitors encounter when they enter the park from Flagstaff or Williams. The new Visitor Centre is to open in 2000 in conjunction with a new transportation system (see below).

I received a brief summary of the outline of the proposed new Visitor Centre. There is to be a multi million dollar venture at the new light rail terminus to construct what is to be called an "*Orientation Centre*". Most of the interpretation will be in a series of outdoor displays. This is expected to reduce the demand on Ranger Staff and the necessity for as many staff at the centre. The public can have 24 hours a day access. There would be full displays for each walk.

That there needed to be a different kind of visitor Centre and that it should be at a different location needs to be considered as an important aspect of managing a World Heritage area.

**Visitor Centre Location:** *It was considered locating the Grand Canyon Visitor Centre outside the National Park. In Queensland, this has already been done for the Riversleigh World Heritage Fossil Site Visitor Centre has been located in Mt Isa, about 250 kilometres from the site. The Great Barrier Reef effectively has a "Visitor Centre" on the mainland in Townsville. There needs to be serious thought given to locating a Fraser Island Visitor Centre in Hervey Bay and/or Rainbow Beach. It may be better to have the Uluru Visitor Centre in the Yallara Village. This would mean that the time of visitors within the park could be better utilized rather than imposing on the island's resources while spending time familiarizing themselves with the options available. A Visitor Centre off the park would reduce the number of staff who have to be located inside the National Park. It is an issue which requires much more thought before rushing i to create new Visitor Centres within National Parks.*

## The GCNP Light Rail

The Grand Canyon National Park has a number of problems which the development of a light rail system will address. These include the problems of air quality which, in a vista over 12 kilometres wide, has become really critical. Smoggy air has depreciated the grandeur of the Grand Canyon.

The light rail will also reduce the need to sacrifice more of the park area for parking lots. It will also eliminate traffic congestion. The substrate at the top of the rim is very durable limestone and so the imperative to "harden" the road is not as significant as it is on Fraser Island where the surface is extremely loose, unstable and very prone to erosion from any surface disturbance.

The development of a light rail for the Grand Canyon National Park was outlined in a widely distributed poster, produced in November, 1997, which explained the rationale behind this innovative initiative, as well as providing some graphic illustrations of the type of system envisaged and the route to be followed:

### A New Way to Visit

*Over the next several years, transportation at Grand Canyon National Park will be converted from automobile based system to one featuring efficient mass transit.*

*Day-use visitors will travel by light rail from the gateway community of Tusayan, just south of the park, to the Mather Point Transit Centre six miles north.*

*Alternative fuel buses, likely powered by electricity or natural gas, will serve routes within the park.*

The National Park Superintendent explained more:

*We are pleased to announce the decision to implement a combined light rail alternative fuel bus system to transport visitors to and within the Grand Canyon National Park. After exploring several options, light rail was selected as the optimum mode for travel ... to the park. We believe that this combination, along with a new transit center offering orientation services, will provide the visitors with a quality experience of a great national park.*

*In recent years, management of the Grand Canyon National Park has become increasingly challenging. Protection of park resources,*

*providing a quality experience for park visitors are becoming ever more difficult with the rapidly increasing visitation and the accompanying vehicles. The 1995 Grand Canyon National Park Management Plan defined a new way to visit the park focusing on public transportation and enhanced educational and recreational opportunities. ....*

Under the heading "**Choosing a Transit Mode and Route**" the explanation given was:

*The 1995 General Management Plan directed a profound and fundamental change in the way people visit Grand Canyon National Park. With mass transit replacing private automobiles on the canyon's busy South Rim, several critical decisions were necessary, including which mode of transit and transit routes to use. During 1995-96 a variety of transit modes were researched and their feasibility for the Grand Canyon was evaluated. The National Park Service elected to use an environmental assessment process to evaluate the merits of the most promising transit modes and routes, and to formally incorporate public input.*

*The Draft Environmental Assessment, Mather Point Orientation/Transit Center and Transit System was released in March 1997 to gather information on possible transit modes and routes for travel to and around South Rim. Following analysis of public comments and further study, a Final Environmental Assessment (including a proposed transit mode and route was released in July 1997 and adopted in October 1997.*

### Transit Modes Chosen: Light Rail

*Day use visitors will travel by light rail ... Light rail trains will serve this route year round, at regular intervals, with a train scheduled to depart about every five minutes during the peak season. Light rail has the capacity to move large numbers of people in spacious and easily loaded cars, by varying the train size and intervals, to adjust to the differing demands of various seasons and times of the day. ....*

**How?** *The National Park Service intends to develop and operate the light rail and bus components of the transit system through a concession contract. The system will be funded through a portion of visitor entrance fees earmarked for transit.*

*When? The transit system will be implemented in phases. Expansion of the existing shuttle bus system is underway and will continue for the next several years. Completion of the Mather Point Transit Center, an integral part of the overall transit system is scheduled for September 2000. Conditions permitting, the system's light rail component will be in place shortly thereafter. Interim transportation to Mather Point Transit Center will be provided.*

It appears that the light rail at the Grand Canyon will set a precedent for Fraser Island.

**Aircraft in the Park:** Tusayan is the location for the Grand Canyon Airport. The line up of helicopters would make the American invasion of Vietnam look mild. Even the relatively few overflights experienced in the quiet December days seemed incredibly intrusive.

**Overflights:** It is worth quoting here from the Lonely Planet travel guide to "Southwest — Arizona, new Mexico, Utah" by Rob Rachowiecki (1995). The Lonely Planet is not renowned as a forum for conservation arguments but on the Grand Canyon, it expresses a layperson's viewpoint on aircraft which needs to be heeded for Fraser Island. The big difference between the Grand Canyon and Fraser Island is that at the Grand Canyon the National Park managers does not have the power to prevent landings of most of the aircraft which overfly it:

### ***Grand Canyon Overflights***

*The idea of flying over the Grand Canyon at low altitude appeals to some people. However, passengers may want to consider that there have been many complaints about aircraft noise in the park and concerns about flight safety.*

*It is difficult to get away from aircraft noise anywhere in the park for more than a few minutes, The NPS recently estimated that visitors have to put up with aircraft noise during 75% of daylight hours. The natural quiet of the Grand Canyon is part of its magnificence and the current levels of aircraft noise are not acceptable in a national park.*

*While recent efforts to limit air pollution have met with some success, stopping noise pollution has been a losing battle. Regulations are supposed to keep aircraft above 14,500 feet in 44% of the park and above the rim in the remaining area, but*

*increasing numbers of flights have led to violation of these laws.*

*Safety is another concern. In February, 1995, eight people were killed in a small tour-plane crash two miles north of Grand Canyon Airport, Associated Press reports listed this as the 11th fatal air crash near Grand Canyon National Park in less than nine years. A total of 80 people died in these crashes, while fewer than 20 survived.*

There are clearly many lessons here to be learned for Fraser Island. One question which arises is if the Queensland Department of Environment was held legally liable for any air crashes which were to occur at the Orchid Beach Airstrip while it was under their control, would not the same Department be legally liable for any accidents in the beach landings using permits which the DoE had issued for using specific sections of beach?

### **Some Other Positive Moves**

There are a number of really positive things happening in the Grand Canyon National Park to address these issues. Many of these should be considered in Australia and some have very strong potential applications on Fraser Island.

**The Grand Canyon Association:** The role of voluntary organizations and the mutual support with the National Park Service in the park continues to impress. The Parks Service hands out to everyone entering any National Park a an 8 page tabloid called, "The Guide". It is worth quoting from the Grand Canyon guide:

*One of the best ways you can help support the Grand Canyon National Park is by becoming a member of the Grand Canyon Association (GCA). This non-profit organization operates bookstores throughout the park and publishes educational materials. Profits generated by sales directly support the Grand Canyon National Park. Members of the GCA receive a 2% discount ... For as little as \$20.00 per year you can join a network of friends, participate in special members events, receive discounts on purchases, keep up with park news and issues via "Canyon Views".*

*You may sign up today at any GCA bookstore and receive your discount immediately ... our way of saying "thank you" for supporting Grand Canyon National Park.*

While we don't know the amount of the financial contribution of GCA to the National Park, we do

know from our previous contact with the Golden Gate National Park Association in San Francisco that the annual contribution from this voluntary association to the National Park management was worth over \$2 million of support.

**Volunteers:** In another part of "The Guide" the appeal to volunteers to more actively assist park management was more direct:

*If you would like to give something back to the Grand Canyon, join the Habitat Restoration Team! Projects will help restore the Canyon's natural environment, and may include reporting or planting native plants and removing alien species; restoring a historic cabin; creating tent pads for volunteers; painting and carpentry. Projects range in length from a few hours to a week. For more information contact ... Large projects will require planning time; if you have a few hours to give we may be able to utilize your talents today.*

While we did not get a chance to find out the actual contribution of volunteers here, we know from our visit to Great Smokies and San Francisco National Parks in 1993 that it is worth many much — 66.3 work years in the case of Golden Gate National Park in 1992.

### Emphasizing Education

There seems to be a much greater emphasis given to education and to providing the highest standard of interpretation. During our visit to the Tusayan Ruins we chanced to stumble across a guided tour. This and the quality of interpretation we experienced at Mesa Verde were without doubt the highest quality presentations we have experienced in any National Park anywhere.

**Ranger Led Programs:** Although the Visitor Centre was disappointing the quality of the Ranger led programs was superlative. Even during the off season there were 8 such programs daily being offered from the South Rim. They were offered from a number of centres at a diversity of times so that a person could get in up to four programs in a day. Topics such as "Alien Invaders", Geology talk, Fossil Walk, Raptor Flight, Glimpses of the past, Hawk migration and an evening program.

The part which cannot be overstated is the quality of the interpretation. There was a Korean family with us learning about the Anasazi Indians and their

culture and they appreciated the wonderful standard as much as we did.

**The Grand Canyon Field Institute:** "The Guide" says:

*In-depth classes about the Grand Canyon are offered through the Grand Canyon Field Institute. Classes are eight days in length and cover subjects such as Geology, Ecosystems, native Cultures, Birds, Photography, Botany and much more.*

*Introductory and advanced backpacking trips are available, as well as classes featuring day hikes and walking tours. Classes offered April through early November and meet on either the North or South Rim.*

**Educational Use of Resources:** One of the more interesting discoveries of the educational use being made of National Parks for educational purposes. The poster I have indicated plans for the Grand Canyon historical buildings to be converted to a Heritage Education Campus. I am not sure if this includes buildings which are currently used for commercial accommodation such as the lodges but it probably includes the current Visitor Centre.

The new plans I was able to see say:

*This collection of nine historic buildings currently serving for administrative and industrial purposes, will be transformed into a visitor discovery and education complex, providing in-depth education opportunities".*

**The Junior Ranger Program:** This program for children from 4-14 allows them to complete specific educational activities and receive a certificate and badge in return. The Junior Ranger program is a useful educational model.

# Mesa Verde National Park

## Background To Visit

On this informal trip, on 16 December, we did not anticipate as much relevance to the management of nature based parks in Australia except for parks such as Kakadu and Uluru where these parks have much more cultural significance. However, there were many features to be noted and benefitted from.

The Mesa Verde National Park was inscribed on the World Heritage List in 1978, the year the World Heritage Convention came into force and three years before any Australian site was added.

## Background to the National Park

Mesa Verde National Park is approximately 52,000 acres in size, about a third of the size of Fraser Island. It is surrounded on three sides by the Ute Mountains Indian Reservation. This is most important because the Reservation serves as an important buffer and allows the National Park to be managed right to its borders. A glimpse at the map would show the road to the Wetherill Mesa runs right along the Reservation border and the road to the Cliff Palace actually crossing into the Indian reservation.

**Staffing:** The park has a permanent staff of about 45 (the same as Fraser Island) but this has recently been reduced to this level by the loss of four permanent Ranger positions and the four law enforcement positions. This is the result of recent Federal Budget cuts.

**Volunteers:** As a result of the staff cuts the use of volunteers is even more critical. Volunteers mainly arrive during the summer when they bring up their trailers and live in the park. In return for their services they are given free hook up to power and gas. The winter volunteers have access to some surplus staff housing if they undertake to work for a minimum of 32 hours per week. The Rangers appear to welcome this.

The Rangers boast that no other National Park offers more "one to one Ranger contact to visitors than Mesa Verde. At the height of the summer they have guided Ranger tours leaving the Museum every five minutes. On this day there were only three guided tours.

**The Quality of Interpretation:** The experience of being in a guided group today convinced me that the best two interpretive guides I have yet encountered anywhere were the two at the two National Parks I have visited here.

Clyde Benalla is a native American who gave a most eloquent, evocative and interactive interpretations I have experienced in an hour. It was a great and rich experience as he helped erase any preconceptions that the Indians who had established the cliff dwellings were ignorant or stupid. His eloquence and his explanation of the fundamental religious beliefs of the Native Americans certainly did a great deal to improve the poor perceptions created by the old cowboy movies that Indians were inarticulate savages with no advanced religions or social structure. His appeal earned more respect for his people and his ancestors.

**Fire:** We observed many acres which had been burnt out but we were unable to find anyone who could discuss with us the cause of the fire or the part fire plays in the park. This is a much larger issue in Australian National Parks.

## Protection of the Archaeological material:

Everywhere we saw any archeological remnants it was well protected with proper shelters and very good curatorial techniques. There were only a few places where the sites were fenced off and relatively few rails around. The sites were well interpreted with good explicit but simple signs which made self guided visitation very rewarding. Although many sites were unsupervised they were protected from impact of visitors. There was no graffiti, litter or other signs of degradation of these sites.

**Learn from the Paths:** The Parks Service has created well defined paths which were conducive to people sticking to the paths which were all well formed bitumen (better for walking on than the dirt). There were very few "Do and Don't" signs. Hardening of the paths and no fences were striking features of the self guided management. It was obviously successful because any footprints which strayed from the path would have been evident in the snow. The fact that only a few strays had occurred within the last week was testimony to the fact that most people kept to the paths. The only exceptions were where lookouts had been closed off because of ice on the steps but people anxious to get photographs had stepped around the



barricades to get their photos notwithstanding. However, the barricades would have satisfied the Duty of Care obligations.

**Buildings in the Park at Far View:** We hadn't noted the buildings at Far View on our way into the Park but on our way out we were confronted by a battery of units facing south which were built on the most prominent position and detracted enormously from the feeling of naturalness within the park. Unfortunately, we could not find out who managed these buildings but it seemed that they could accommodate several hundred guests. Nearby was a service station and store which were obviously operated by concessionaires. The Visitor Centre which we had tried to get to by a tunnel under the road was closed for the season.

**Relocating the Museum and Visitor Centre to the Park Entrance:** There are obviously plans afoot to relocate the Museum and Visitor Centre more appropriately at the entrance to the National Park. This would be the most important strategic step in improving the management of the Park. It is a bit hopeless if people have to drive 11 miles to get to the Visitor Centre which may be closed in the off-season or 19 miles to get to the Museum. The very useful "Guide" which was given to us at the gate was not read until we were well inside the park and it seems better if the orientation and familiarization of the values of the park are given to all visitors before they visit. It would help to heighten their appreciation of their visit.

The Joint Enterprise of the Mesa Verde Museum Association with the Grand Canyon Association:

## Other American Sites

On 15 December we also visited two very important natural sites within the Navajo Indian Reservation. These were the Dinosaur Footprints outside Tuba City, Arizona and Monument Valley in Utah. It is difficult to overstate the significance of these sites yet they were appallingly managed, if there can be any claim of management at all.

### Dinosaur Footprints

The dinosaur Footprints were in the Navajo Reserve 6 miles outside Tuba City. Apart from a plethora of well preserved footprints from a variety of dinosaurs, there was much fossilized droppings and one egg embedded in the rock all within easy walking distance at this one easily accessible site. There was not any sign at the site to indicate where the site was nor what constituted it. Likewise there

was no fence and nothing to restrain people wandering around the site unconstrained.

We were able to find a guide at the site who charged us each \$5.00 a piece plus more to show us around. What existed in situ was quite amazing yet there was no curatorial work done there, nor were there any management practices in place to protect and preserve the many artifacts at the site. While we appreciated the significance of the site there was nothing nor nobody to tell us the period when these relicts were created or anything else which could have made the visit more meaningful. It had potentially much more economic potential to the Navajos with better management.

### Monument Valley

The story at Monument Valley was just as depressing as at the Dinosaur Footprints. This site in the vast Navajo Reservation has enormous aesthetic value and an interesting geological story. Unfortunately, the siting of many Navajo residences in this park have tended to depreciate some of the landscape values. The road has not been sealed and this reduces the appreciation of the site for many. However, the residents within the valley have resisted moves to upgrade the road because they don't wish to encourage more tourism or more traffic to contend with. As a result the potential of the site is lost. Much could be made with a Management Plan which leant heavily on expert consultant's advice on landscape planning and traffic management.

### Puye Cliff Dwellings

The Puye Cliff Dwellings contained a lot of wonderful archeological treasures. We were impressed by these relics which were managed by the Santa Clara Indians but they were most impressive. What we enjoyed most was being able to have a self guided tour without the presence of others to intrude. On the downside though we could see the impact of many people visiting this site and eroding the soft tuff rock very quickly. The volume of visitation is unsustainable on the present level of management.

### Various Museums and Monuments

In addition to natural monuments we also visited a number of museums and art galleries where there were a number of points we observed in relation to the interpretation and presentation of the works in the respective collections.

These included the Van Vechten-Lineberry Museum in Taos, the Georgia O'Keefe Museum and the Museum of Folk Art in Santa Fe, and the Museum of natural Sciences in Albuquerque. In all the presentation was very good and of a standard not often encountered in Australia. It would be tedious to detail all of the points in this report except to indicate that there is quite obviously scope for making improvement in many aspects of interpretation of both the natural and the cultural heritage in Australia.

## Santa Fe

Santa Fe has long been held up as a model for a town which has made much of developing a townscape around a theme of vernacular architecture, in this case it is the adobe style construction. It sets a marvellous precedent for a town like Maryborough which has probably one of Australia's best assemblages of unique vernacular architecture to act to help ensure that new buildings are in keeping with the community theme.

There is also a need to consider the idea of a theme for buildings both within the Great Sandy Region and in the communities on its doorstep such as Hervey Bay, Rainbow Beach and Noosa.

## Rara Avis

It is difficult to be objective about Rara Avis and the ecotourism in Costa Rica because the rainforest is so different and attractive. So I will confine myself to the comments on the sustainability of the project and begin by indicating that I do not believe that for all of its good intentions that Rara Avis is a good role model for other ecotourism operations for a number of reasons.

Rara Avis seems to have the same drawbacks as Fraser Island's Kingfisher Resort when it comes to setting a model for ecotourism.

### Objectives

Rara Avis which was established in 1983. It is a publicly held Costa Rican corporation which *set out to prove that tropical forests can create substantial market benefits if the appropriate resources are managed properly*. It seeks *to demonstrate how economically sound conservation movement and management of a tropical rainforest can serve the needs of landowners and governments, as well as the planet. It strives to serve as a financial and ecological model for neighbours, near and far*.

The above statements in italics are from Rara Avis' Statement of Direction on its World Wide Web Home Page.

Rara Avis covers 409 hectares of primary rainforest adjacent to Braullio Carillo National Park and has found buyers for an additional 558 hectares. Its *primary business is tourism, which in turn allows the financial flexibility to support other programs*. As such Rara Avis is similar in its corporate objectives to **GO BUSH Safaris** .

### Location & Access

Rara Avis is very remote and isolated from most of the Costa Rican infrastructure. Because of its remoteness there is only one access service per day. It takes just over an hour by bus from San Jose to the base at the village of Hortequas where people change to a tractor drawn trailer which then takes about two hours to traverse the 12 kilometres to El Plastico, an out station near the entrance of the Rara Avis Reserve. The last three kilometres are extremely rough and can only be traversed by a 4WD tractor. This takes an extra hour. It is so rough that most people prefer (and are encouraged) to walk.

**Competitiveness:** Rara Avis isn't inexpensive. Although it offers very crude facilities; there is no electricity; some accommodation offers only cold showers; there is no lounge or common room and the conditions are quite primitive with no rooms even painted or lined all inclusive accommodation costs \$US 80 (\$A128) per day.

### **Inappropriate Siting**

Rara Avis's main lodge is in a beautiful location and deserves the high esteem and praise that it has earned in the 14 years of operation. However, we have concluded that the main part of the resort is at the wrong part of the property. As such while it is close to the centre of the best and most scenic attractions, particularly the waterfall, the logistics of serving it are prohibitively more expensive. The impacts and costs can't be fully justified.

The difficulty of access is a deterrent to tourists and many potential visitor nights are lost because of the location. The cost of operation is also increased by the remoteness.

All supplies and staff have to be ferried over the impossibly rough road. The toll on the tractor adds to the very high maintenance costs. Work has to be constantly undertaken on the road to even enable the supplies to reach the Lodge.

The economics of the lodge at this site can't be justified. More potential clients would be attracted if the main lodge were relocated to the Plastico site. That would reduce the operational costs of running the resort and reduce the environmental impact and make access easier and more comfortable thus attracting more guests.

**Lack of Electricity:** The intention to make people more appreciative of the values of the rainforest is diminished by the fact that there is no electricity at the Lodge and so the capacity for guests to enjoy slide shows, videos and other presentations in the evenings doesn't exist. There is a good library but the ability to read from it is mainly restricted to daylight hours or in the crowded dining room at night.

**Potential for injurious agents:** Another part of the disadvantage of the site chosen is that, while intrinsically beautiful near the waterfall and close to the primary rainforest, it is the source of potential introduction of injurious agencies to the very resource which the objectives of Rara Avis is sworn to attempt to protect.

The walking trails which radiate out from the lodge would carry fewer than 1000 people per annum and yet they are incredibly eroded, degraded and are adding to the degradation of the rainforest. It is obligatory to wear gum boots just to cope with the mud.

**Higher maintenance costs:** The economics of the site are that the wear and tear and maintenance are so much higher just to get the last three kilometres. The break down of the tractor on this section is not uncommon. The tractor had broken down and resulted in our travelling up in a four wheel drive car equipped with chains to handle the slippery conditions. However, even that could only go as far as "El Plastico". On the way out the tractor broke down again between the Lodge and El Plastico as well as a second time on the trip which meant we missed our bus back to San Jose.

**Scarcity of fauna:** Rara Avis means "rare birds" yet a reference to our personal diary indicates that the sightings of birds near the Lodge did not live up to the name of the property. In contrast the bird sightings close to "El Plastico" on the very edge of the property and an hour or more closer to the main point of access at Hortequas was abundant with birds. In half an hour there we had seen many species there whereas in five days at the lodge we had only recorded 17 species despite the fact that we are not entirely novices. A couple dedicated exclusively to birding recorded only 50 species in 9 days at the lodge.

**The El Plastico Alternative:** We believe that the potential for a better more attractive and more profitable lodge at El Plastico has been overlooked. El Plastico is not an unattractive site. The views from the hill top over the lowlands are quite grand. The Tigre River adjacent to it has its own attraction. One can see many more birds and animals in a much shorter time from here.

Although the land around Plastico has been cleared, there has been no attempt to reforest the derelict landscape. The conservation objectives of Rara Avis would be better served by practicing some reforestation and rainforest rehabilitation there. Such an exercise could be a very positive model for other landholders with degraded land which could benefit by rehabilitation.

If the ecotourism is profitable it is more likely that the objective of preserving the primary rainforest can be achieved. However if the Lodge operations were fully viable then the sale of the resort to the

hotel chain as is now proposed putting the future of the forest at increasing risk could be avoided.

**Ecotourism siting dilemma:** There is widespread problem with ecotourism resorts wanting to locate as close as possible to the destinations which they are wanting to preserve. This is an on-going and recurring dilemma. It happened on Fraser Island with the decision to locate the Kingfisher Resort on Fraser Island rather than on the mainland where infrastructure existed or was easier to obtain. The upshot in every case which I have studied is that where the ecotourism resort is located too close to the resource they are drawing on as an attraction, the resource suffers and in most cases the profits of the resort never lives up to expectations. This is the case with Rara Avis.

### **An Alternative Model**

On the other hand there is a similar resort to Rara Avis located near Monte Verde. The San Luis Ecolodge and Biological Station adjacent to the famous Monte Verde Cloud Forest was originally modelled on Rara Avis.

Unfortunately our commitments did not allow us to visit this site but we had a number of reports and it is well described in the Lonely Planet guide to Costa Rica.

Apparently San Luis which was built at a cost of millions of dollars is a much better appointed and finished complex from much more up-market buildings to a dormitory.

The Lonely Planet guide describes it as follows:

*"Formerly a tropical biological station, this new facility now integrates research with ecotourism and education. It is directed by on site tropical biologists and has hosted many researchers and university courses. The recent addition of comfortable Accommodation has made this a*

*station to rival better known places like La Selva as a great place to stay for travellers interested in learning about the cloud forest environment and experiencing a little bit of traditional rural Costa Rica. ...*

*"There are a number of trails into primary and secondary rainforest and there's also a working farm with tropical fruit orchards and a coffee harvest.*

*"Activities include day and night hikes guided by biologists, horseback rides, excellent birding, farming activities, seminars and slide shows, research and cultural programs, and relaxing activities. ..."*

Many of these activities are not possible at Rara Avis because of the lack of power and the isolation from the local community.

### **Viability**

While some may consider that it is not of relevance whether or not such ecotourism resorts operate at a profit or not, it is argued here that it is very critical because the environment objectives can only be met if the projects are viable.

In the case of Rara Avis while making a small operational profit the resort has not made sufficient profit to pay the interest on the huge borrowings made to acquire the property. As a result it is now clearly foreshadowed that the resort will be sold to a "hotel conglomerate" and while the new owners may be sympathetic to protecting the environment, the future of Rara Avis' primary rainforest is no longer as secure.

It is important that if **GO BUSH Safaris** is to be able to continue to support the environment, then it must be economically viable.