

RESERVE MANAGEMENT CONSULTANT'S REPORT No. 6

INTERPRETATION OF NATURE RESERVES

by

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INTERPRETATION OF NATURE RESERVES

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by: AKATARAWA ASSOCIATES

INTERPRETATION OF NATURE RESERVES

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INTERPRETATION OF NATURE RESERVES
SUMMARY OF RECOMMENDATIONS

SIGNIFICANCE

- 1.1 That the Department note the importance of "management in relation to people" as a problem contributing substantially to the costs of managing nature reserves, noting also the potential role interpretation can play in its longer term, systematic resolution.

DEFINITION

- 1.2 That the Department consider adoption of the following definition of interpretation:

"Interpretation is a communications activity which aims to promote appreciation of wildlife conservation and nature reserves, both through first-hand experience and through the imaginative use of illustrative media."

MASTER OBJECTIVES

- 1.3 That the Department adopts a set of master objectives of interpretation, such as those stated on page 10, which cover the threefold role of interpretation, namely:
- as a means of promoting awareness of nature;
 - as a direct aid to management; and
 - as a means of promoting public awareness of the activities of the Department.

PRINCIPLES

- 2.1 That the Department's interpretation strategy be based on the five principles of interpretation elucidated in Part Two of this report, namely:
1. Interpretation is an approach to communication, not simply a means of providing information;
 2. Interpretation is a "one to one" form of communication which, deftly used, can be achieved through some of the mass media;
 3. Interpretation is an educational activity, but one intended to inspire, not instruct;
 4. Interpretation should be thematic, the best themes holistic; and

5. Interpretation is an art which can be applied to the needs of conservation area administration.

AND THEIR APPLICATION

- 2.2 That the interpretation strategy foster and develop the theme of "... appreciation from a distance ..." as being most appropriate both to the needs for interpretation and to the primary objectives of nature reserves in the State.
- 2.3 That, for the purposes of their interpretation, the Department fosters a broad view of the cultural values of nature reserves. In addition to their faunal and floral interest, nature reserves embody historic, archaeological, wilderness, general environmental and a variety of natural history values other than those relating to the "flora and fauna". Recognition of these attributes will broaden the effectiveness of interpretation programs.

PRESENT ACTIVITIES

- 3.1 That the Department note the diverse range of products of high quality which have directly interpretive functions or major "spin-off" value to interpretation and which are already being produced by its members. These include a range of publications, the nature reserve management planning process and surveys and research activities involving participation of amateur interest groups.

INTERPRETIVE PLANNING

- 3.2 That, to improve the effectiveness of existing activities and to better integrate such new ones as may be required, the Department adopt a practice of express interpretive planning, addressing the questions:
 - What are the objectives of the activity?
 - What are the best means of their fulfilment?
 - How does the activity fit with the overall Departmental strategy? and, when complete
 - How well does the product meet the objectives set for it?
- 3.3 That the Department adopt a form of interpretive planning adapted from that used by Parks Canada (page 27) to suit its broader needs, including the need for coordination of activities of a

number of responsible sections, without detracting from the individuality of their expression.

ORGANISATION

- 3.4 That the Department's interpretive activities be maintained in four separate streams as the responsibilities of appropriate Sections of the organisation, viz.:
- General public interpretation [Extension and Publicity Office];
 - A local community nature reserve program [Reserve Management Section];
 - A site-related nature reserve program [Reserve Management Section/ Extension and Publicity Office]; and
 - An amateur participation, (research and survey) program [Wildlife Research Section].
- 3.5 That the necessary coordination and planning of the individual interpretation programs be effected by establishment of a Wildlife Interpretation Coordinating Committee under the Chairmanship of the Assistant Director Wildlife, thus completing an organisational structure such as that illustrated on page 29 (Fig. 1).

LOCAL COMMUNITY PROGRAM

- 4.1 That local community interpretation programs continue to be developed based on the management planning process.
- 4.2 That management plans be prepared subsequent to establishment of adequate resources for active management of the reserves concerned.
- 4.3 That the personal component in local community contact be maximised, both during and following planning.
- 4.4 That methods of maintaining local interpretive effort following completion of the planning process be routinely included as a subject of provisions of management plans.
- 4.5 That the full documentation of the management planning process, now in preparation, recognises and develops its interpretive role.

- 4.6 That management plans be supported with popular summaries, in leaflet and booklet form, which highlight the major features of the reserves concerned and the provisions for their management. This popular material should be prepared by a communications professional.

INTERPRETATION ON-SITE

- 4.7 That guidelines for the public use of nature reserves be developed. These guidelines should include standards for construction of on-site facilities.
- 4.8 That, in view of their interpretive potential, in terms of the image they project of the management authority responsible, all facilities for any kind of public use on nature reserves be regarded as facilities for interpretation.
- 4.9 That, as a pre-requisite to installation of public facilities, specific provision be made for them in reserve management plans. This requirement should include production of publications for on-site use.
- 4.10 That the provisions of recommendations 4.8 and 4.9 above apply to facilities for public use which may be recommended or offered to the Department by Local Authorities, local tourist committees and other groups such as service clubs.
- 4.11 That on-site interpretation be regarded as a peripheral part of a more generally applicable site-related interpretation program; that it remain principally reactive and be maintained in the background except on specified nature reserves where the demand or potential is such that interpretation should be a primary management objective. Nature reserves where on-site interpretation may have a high profile include Two Peoples Bay and the nature reserves near Perth including those in nearby country Shires such as Toodyay, Northam and York.
- 4.12 That the role of the management plan as the means of ensuring effective planning for on-site interpretation be spelt out in the documentation of the planning process now in preparation.

INTERPRETATION OFF-SITE

- 4.13 That the overall site-related interpretation program continue to be primarily based on publications and other products, complete in themselves and which do not pre-suppose or necessarily encourage their audience to visit nature reserves.
- 4.14 That consideration be given to applying interpretive products of this type in the active promotion of nature reserves as delicate, often remote and frequently inaccessible areas not generally available for use by the public.

INTEGRATION AND COORDINATION

- 4.15 That, while there is great value in maintaining two parallel sub-streams of site-related interpretation activity, those for application on-site and off-site respectively, their coordination under the auspices of the Wildlife Interpretation Coordinating Committee be considered as a major function of that Committee.
- 4.16 That the editorial policy, periodicity and format of the magazine S.W.A.N.S. be reviewed in relation to its potential role as the centrepiece of an integrated interpretation program, as a potential source of wildlife and nature reserve news and as a widely distributed source of information about other products of the program.

PRODUCT DISTRIBUTION

- 4.17 That interpretive products of lasting value be sold and that methods of direct mail-order employing an outside contractor be investigated as the means likely to prove most suitable to the distribution requirements of the program.

PART ONE:
INTERPRETATION - A TOOL FOR USE IN CONSERVATION MANAGEMENT

Through interpretation, understanding;
through understanding, appreciation;
through appreciation, protection.

Administrative Manual

U.S.N.P.S.

Conservation of nature in areas set aside from other use especially for the purpose is an idea with substantial popular appeal. Nature interpretation, imaginatively done, provides the means to encourage and mobilise a measure of this more usually passive, popular support. In the management context interpretation can be of great value in securing the natural values of conservation areas. Popular support for conservation, however, is emotionally-based and not wholly predictable. It stems from the same roots as a tide of political environmental activism which has reference points as significant as the "Silent Spring" of Rachel Carson (Carson 1963) and the foundation of the Sierra Club by John Muir. The connections between the two, of potential support for conservation areas and the broader concerns of the environmentalist for his political climate, are clearly evident in the present wilderness controversy in south-west Tasmania.

A number of questions arise from the earliest stages of development of an interpretive strategy for a Statutory Authority which a Consultant is obliged to address from general principles. These questions may also have local connotations beyond our competence to take into account fully. They include questions of ethics and boundaries of responsibility, and, of central importance: Can the proposed program ensure that its results - a better-informed, larger and more actively interested public - will continue to rest easily with the administration responsible for management control? The strategy and its exemplified potential applications we have set out in the following pages, therefore, is a conservative one. Its applications generally lie within bounds already set either by your or other Western Australian Government Departments. On the other hand, the framework lends itself to extension in any required direction.

Interpretation is merely a tool. The work it can do is only as good as the craftsmen who wield it.

1. DEVELOPMENT OF THE INTERPRETATION CONCEPT

The idea of interpretation has its origins in the "heuristic" method of teaching developed in Britain by Beatrice Vernon in the latter part of the nineteenth century. Heuristic teaching encourages learning by discovery, and Mr. and Mrs. C.M. Goethe, U.S. National Parks Service guides at Lake Tahoe in California adopted the idea after watching a British school teacher at work in Switzerland!

In 1919 Steve Mather, the first Director of the U.S.N.P.S. visited Lake Tahoe and was impressed by the way guides, led by the Goethe's, were able to inspire visitors. The Goethe's later moved on to Yosemite National Park at Mather's invitation. This was in 1920, and the continuing Goethe/Mather alliance effectively established interpretation in the management strategies of the Service. A later director, Newton B. Drury, expressed his view of the distance interpretation had come by confirming that national parks are not solely set aside to preserve natural values and historic places. They provide a greater dividend because of their unique capacity to "... minister to the human mind and spirit".

One man, Freeman Tilden, more than any other, guided the development of the interpretation concept from these beginnings through the early decades of the 20th century, culminating in the publication of his book, "Interpreting Our Heritage" (Tilden 1957). In this he set down the fundamental principles of the idea as they had emerged in the preceding 40 years.

Throughout his career Tilden fostered the need for enjoyment and a feeling of involvement as results of interpretation and, in the Foreword to the third, 1977 edition of his book, Gary Everhardt, the latest in a continuous line of U.S.N.P.S. Directors to have understood the value of interpretation, exposed the kernel of the idea by recalling some of the words of Sigurd Olson, a lesser known but clearly equally astute contemporary of Tilden:

"While we are born with curiosity and wonder, and our early years full of the adventure they bring, I know such inherent joys are often lost. I also know that, being deep within us, their latent glow can be fanned to flame again by awareness and an open mind."

Sigurd Olson.

At its best, interpretation has emerged from these decades of development, mainly in North America and Britain, as an art which can enhance appreciation of the countryside by focussing perceptions of the values to be found there. In these countries it has been, and continues to be, applied primarily as a means of enhancing the first-hand experience of visitors to parks and reserves. This is by no means the only use of interpretation. As we proceed toward the end of the 20th century, the right of unlimited access to the countryside will come under increasing challenge. Wallace Stegner, the author of "Beyond the Hundredth Meridian", was looking toward this new order when he wrote:

"... We need to put into effect, for its preservation, some principle other than the principles of exploitation or usefulness or even recreation. We simply need that wild country available to us, even if we never do more than drive up to its edge and look in. For it can be a means of reassuring ourselves of our sanity as creatures, as part of the geography of hope."

Wallace Stegner.

Western Australia possesses a large resource of land in the form of nature reserves, dedicated wholly to nature conservation, in which any form of human activity comes distinctly second to preservation of its natural values. In our experience this resource and the singleness of its purpose is equal to any in the "free" world. Its acquisition and maintenance is a tribute firstly to the far-sightedness and dedication of its many founders and secondly to the conservatism and inertia provided by the British model of a Civil Service applied in a State with abundant natural resources. In developing established principles of interpretation in support of its nature reserve system we are aware that Western Australia has the potential to come close to the forefront in developing the interpretation idea. In submitting this strategy we gratefully acknowledge the thoughts given freely, in person or through their writings, of British, American and Australian leaders in the field, a number of whose works are referred to in this report.

2. DEFINITION OF INTERPRETATION

Interpretation is the means of revealing the greater truth that lies behind every statement of fact. It is a form of communication in which a minimum of information is laid in a pattern to invite discovery of an unstated, deeper set of meanings.

There are innumerable examples of good interpretation according to this definition, from the most complex, multi-medium presentations to the simplest inscriptions and aphorisms. We have chosen two of the latter by way of illustration. The one is from Wendy Goldstein of the N.S.W. National Parks and Wildlife Service. The other is inscribed in St. Paul's Cathedral:

The teachers had swallowed a 'magic pill' and were now engrossed in charting a nature trail for an ant.

Goldstein (1979)

Si monumentum requiris, circumspice.

(If it is my memorial you seek, gaze around you.)

Sir Christopher Wren.

Applied to the first hand discovery of the wonderful intricacies of the natural world, the definition of interpretation proposed by Freeman Tilden would be hard to better:

[Interpretation is] "... an educational activity which aims to reveal meanings and relationships through the use of original objects, by first hand experience and by illustrative media rather than simply to communicate factual information."

Tilden (1957)

Applied to marketing environmental conservation, interpretation is the art of explaining "... the past in relation to social conditions, the character of natural areas ... or man and environment in more general terms with ... the ultimate aim of pointing a conservation message." (Aldridge 1976).

3. THE IMPORTANCE OF OBJECTIVES

Statements of definition such as these by Tilden and Aldridge respectively, are either very general and basically illustrative, or more specific but derived for particular purposes. That used by Freeman Tilden is based on the experience of the U.S.N.P.S. and the emphasis placed by that organization over the period concerned on personal contact with the public through the medium of guides, and later, Ranger Naturalists. Don Aldridge, on the other hand, writing as the Assistant Director (Conservation Education) of the Countryside Commission for Scotland, clearly had the needs of the U.K. populace and environments at heart.

Interpretation has many facets. Its principles are as applicable to marketing consumer goods, religion and political viewpoints as they are to the management of conservation areas. As a tool to be applied to a specific task its successful use requires pre-definition and regular review of objectives, the more exhaustive and precise the definition and review process, the better (Putney and Wagar 1973, Wagar 1979, Sagan 1982).

The studies quoted above, and many similar ones, have taken place within a framework of established interpretation systems. Developing an interpretive strategy for a particular purpose, largely from first principles, which is the opportunity now being enjoyed by your Department, provides an ideal chance for setting a pyramidal hierarchy of objectives, beginning from the most general and working towards increasingly detailed levels. Opportunity also exists for iterative refinement of objectives, in both development and application phases of the strategy. This is the appropriate stage to derive a set of first level, or "master" objectives, broadly stated, as a basis from which to view and select principles of interpretation to fit the strategy - the task of Part Two of this report. The "master objectives" have been derived following a review of present perceptions of responsibilities and needs for public interpretation in the reserve management arena. Respondents in this review included the Chief Research Officer (Wildlife), the Chief Reserve Management Officer and members of the Reserve Management Section of the Department of Fisheries and Wildlife. The results of this review are as follows.

4. A VIEW OF THE RESPONSIBILITIES AND NEEDS FOR PUBLIC INTERPRETATION
IN THE MANAGEMENT OF NATURE RESERVES.

The objectives for the management of nature reserves are set out in Section 12A of the Wildlife Conservation Act. Statutory responsibilities of the Wildlife Authority, through the Department of Fisheries and Wildlife, for management of nature reserves in facilitation of their appreciation by the public appear to be limited to: "... promotion of the study of flora and fauna" and "... promotion of the study of the natural environment."

As provisions for public education they are similar, though perhaps sparser, to those in parallel legislation in the other States. In N.S.W., for example, which has a particularly active education group in the National Parks and Wildlife Service, interpretive activity rests on the Director's responsibility, under Statute to "... promote such educational activities as he considers necessary in respect ..." of every national park, nature reserve, etc., and to "... promote such educational activities as he considers necessary to awaken and maintain an appreciation of the value of animal and plant life."

The Western Australian example is unusual, however, in the staunchly maintained separate development both in administration and concept of national parks and nature reserves:

- i. Our understanding of a national park is an area of land or water set aside for public use by virtue of its scenic, aesthetic, recreational, biological or other special features.
- ii. We have seen the principal role of the Western Australian Wildlife Authority as being to maintain scientifically interesting and valuable representative associations of native plants and populations of animals in reserves under its control.

EPA (1975)

Western Australia is also unusual in that during a surge of Government support for environmental conservation in the 1970s, which occurred to a

greater or lesser extent throughout the Antipodes, the emphasis was nearly wholly on land acquisition, at least insofar as nature reserves were concerned. Development of management principles and infrastructure has occurred during a distinct second and later phase, hopefully in prelude to a new era of expansive Government interest in conservation areas.

The framework for management was proposed by Burbidge and Evans (1976), in which the need for public cooperation in amelioration of untoward human influences ("management in relation to people") was recognised as an integral part of the overall strategy.

The importance of management "... in relation to people ..." has become increasingly apparent as the management initiative has developed. Wallace (pers. comm.) estimates that 80 per cent of the work of the Pingelly Reserve Management Team falls into this category. With the exception of a few special development projects, including the development of management strategies and guidelines, and management planning which is not in direct response to public demand, all the work of the Wanneroo-based group of Reserve Management Section staff falls into the "people management" category and is estimated to consume 80 to 90 per cent of normal working time. The Reserves Officer at Two Peoples Bay spends marginally less time on management in relation to people (70 per cent, Folley (pers. comm.)) than other members of the Section, although a much higher proportion (47 per cent) is concerned with their direct management as visitors. It is a useful context to a discussion of interpretation of Western Australian nature reserves to recall that Two Peoples Bay receives 30-40 000 visitors each year. This is the same order of use as some of the more important National Nature Reserves of the U.K., such as Old Winchester Hill. The difference, of course, is in the proportion of the whole population involved, the potential this gives for interpretation, and the potential for increase in pressure as the population of Western Australia grows.

It is also important to note that all respondents in our review distinguished between public use of reserves for recreation and people-related problems in management generally. Recreational use is regarded as a "special case" of people-related management which, with the exception of Two Peoples Bay, 10-15 nature reserves in the near-Perth area and scattered

examples in other parts of the south-west is of low, direct management importance. Its importance by virtue of the general public impression of nature reserves created among users is an entirely different and substantially more important issue.

Other types of people-related problems vary widely but include, for example, direct exploitation and use of reserves by Government instrumentalities, Local Authorities and individuals for access, minerals, and their animal and plant products other than in accordance with the Wildlife Conservation Act; processing of permissions for such activities in accordance with the requirements of Statute; and developing and maintaining a modicum of good relationships with local communities, including direct reserve neighbours, in respect of matters such as fire and pest control.

The great bulk of this activity is reactive and *ad hoc*. Much of it arises from a lack of public understanding and appreciation of the nature reserve system and of the role of the Department in its management. Many of the problems respond to explanation of these aspects but long-term effectiveness cannot be guaranteed in a reactive situation. All officers identify lack of public appreciation of the purposes of the reserve system and the role of your Department as the single most important factor hindering the solution of people-related management problems.

A brief survey of visitors to Two Peoples Bay Nature Reserve during the Christmas-New Year holiday period [1982-1983] evidenced a certain paucity of public appreciation of the nature reserve idea. A series of five questions with stated alternative answers were asked of 100 car loads of visitors entering the reserve to evince their appreciation of the status of the land, the authority responsible for its management and the prime purpose for which it was set aside. The broad results were as follows:

Two Peoples Bay is a nature reserve.

Correct

86%

The high positive response to this question was directly attributable to the new signs erected on the approaches to the reserve. Seventy per cent of those interviewed identified signs as their source of information of the status of the reserve.

Two Peoples Bay is managed by the Department of Fisheries and Wildlife

36%

A considerable difference existed in the appreciation of regular, mainly Albany resident visitors and more occasional visitors coming from further away in their response to this question. Roughly 50 per cent of Albany residents understood the role of the Department, whereas 20 per cent of travelling visitors selected correctly.

A proportion of correct responses are guesses. The largest body of opinion held the "Two Peoples Bay Trust" as the body responsible for management of the reserve (40%).

The primary purpose of the Two Peoples Bay reserve is protection of the noisy scrub bird.

8%

Although a considerable proportion of respondents generally agreed that "protection of rare birds" was a prime purpose of the reserve, only eight per cent could name the noisy scrub bird.

This figure could be compared with the 16 per cent who preferred "... provision of picnic facilities" as the prime purpose for which Two Peoples Bay was set aside.

Summary: The Department of Fisheries and Wildlife has strictly limited responsibilities under Statute to cater for the public either in the terms of its direct use or appreciation of the nature reserve system. The Department has adopted a low public profile and a predominantly reactive role in dealing with people-related management problems. Management in relation to people dominates the resources of the Reserve Management Section. Reserve Management staff pinpoint better public understanding and appreciation of the nature reserve system as being attainable and the long term key to solution of these problems.

RECOMMENDATION 1.1.

That the Department note the importance of "management in relation to people" as a problem contributing substantially to the costs of managing nature reserves, noting also the potential role interpretation can play in its longer term, systematic resolution.

5. OBJECTIVES OF INTERPRETATION

From this position the promised statement of master objectives of interpretation of nature reserves can be made, viz.:

1. To promote public understanding and appreciation of the nature reserve system and its purposes;
2. To promote understanding of the role of the Department of Fisheries and Wildlife in the management of nature reserves;
3. To assist management, fostering the concept of the nature reserve as a resource of land set aside for the protection of flora and fauna which is free from uses, including recreational uses, which might be deleterious to its primary purpose;
4. To encourage "... the study of the natural environment ..." and "... flora and fauna ..." both on selected sites and generally, using examples taken from nature reserves and the flora and fauna they support to illustrate the rewards to be gained in understanding the worlds of nature.

From this point also, interpretation can be defined for the specific applications of the Department of Fisheries and Wildlife. The definition is adapted from that used by Tilden (1957):

Interpretation is a communications activity which aims to promote appreciation of wildlife conservation and nature reserves, both through first-hand experience and the imaginative use of illustrative media.

RECOMMENDATION 1.2

That the Department consider adoption of the above definition of interpretation.

RECOMMENDATION 1.3

That the Department adopts a set of master objectives of interpretation, such as those stated above, which cover the threefold role of interpretation, namely:

- *as a means of promoting awareness of nature;*
- *as a direct aid to management; and*
- *as a means of promoting public awareness of the activities of the Department.*

PART TWO:
PRINCIPLES OF INTERPRETATION OF NATURE RESERVES

The strategy proposed in Part Three of this report and the programs derived in Part Four follow one of many possible lines of development of the principles of interpretation to the needs of the Western Australian nature reserve system. The principles are universal but emphasis may vary with viewpoints and particular requirements. The following brief review of the principles of interpretation provides a context for the strategy proposed and a base from which to review elements of the suggested program.

1. INTERPRETATION IS AN APPROACH TO COMMUNICATION - NOT SIMPLY A MEANS OF PROVIDING INFORMATION

There is an essential difference between provision of information and the idea of interpretation. Mark Twain distinguished the two admirably near the outset of his "Life on the Mississippi":

"To say that De Soto saw it in 1542 is a remark which states a fact without interpreting it: it is something like giving the dimensions of a sunset by astronomical measurements and cataloguing the colours by their scientific names - as a result you get the bald fact of the sunset, but you don't see the sunset.

The date standing by itself means little or nothing to us; but when one groups a few neighbouring historical dates and facts around it, he adds perspective and colour ... for instance, when the Mississippi was first seen by a white man, less than a quarter of a century had elapsed since Francis I's defeat at Pavia; the death of Raphael, the death of Bayard ... Catherine de Medici was a child; Elizabeth of England was not yet in her teens ... Shakespeare was not yet born."

Interpretation brings facts to life. All Mark Twain had to do was sprinkle the date "1542" with a few of De Soto's near contemporaries who

are familiar to everyone: Shakespeare, Elizabeth I and Raphael. But he didn't just list them, which would be as sterile as "1542" itself. They are brought to life in phrases like: "Elizabeth ... was not yet in her teens". Finally, Mark Twain peppered the list of people and events, which is considerably longer in the original than in the excerpts quoted here, with rich, lesser-known associations - names like Francis I, Bayard and Catherine de Medici. In doing this Mark Twain flatters the reader a little, allowing him to own to a passing familiarity with historical figures he may not really have known at all. This is interpretation.

2. INTERPRETATION IS A "ONE TO ONE" FORM OF COMMUNICATION

"Any interpretation that does not somehow relate what is being displayed or described to something within the personality or experience of the visitor will be sterile."

Tilden (1957)

This is an extension of the first principle: that interpretation is a means of bringing bare facts to life. To do so the interpreter lights a spark of interest and then tries to maintain it. Keeping the spark alight requires the "visitor" to become personally involved, the message appealing to his personal experience and ideals.

Consider the message: "... There are nine woodland and forest nature reserves in the Shire of Toodyay with a total area of 3101 ha." This is a bald statement of fact but one which contains something of interest to a number of people.

Interpreted on behalf of the Toodyay resident, it could read: "There are nine nature reserves in your Shire, small reminders of the wilderness of bush from which early settlers cut their farms and homes."

For the Fire Control Officer we might try: "The most efficient method of fire control is protective burning, but in small nature reserves, set in a closely-settled tapestry of farm and bushland, like the Toodyay Shire, there are other values to consider ...".

The Perth naturalist will respond to a third approach: "The Toodyay Road leads to one of the oldest of our country Shires and to nine small gems of woodland and forest. Each is redolent with birdsong and safely protected by its status - *Nature Reserve*."

The key to "one to one" communication is not primarily one of medium. It works as well, and sometimes better, in the printed and broadcast word as it does person to person where social factors can easily cloud the message. With written material the key lies in the use of the same conversational techniques one would use in person to person contact.

The principle of one to one communication has two major corollaries:

- Each main interest group, the local community, the general public and children, for example, should be addressed by a fundamentally different approach. To be at its best each requires a separate interpretive program; and
- with the need to pitch messages in separate programs comes the need to ensure that consistency of meaning is maintained.

3. INTERPRETATION IS A FORM OF EDUCATIONAL ACTIVITY BUT IT IS NOT INSTRUCTION

This third principle is also an extension of the information/communication relationship.

"Truly speaking it is not instruction but *provocation* that I can receive from another soul."

R.W. Emerson

The word "education" used by educators suggests direct and detailed instruction. Used by others, outside the education system, it can suggest poaching! Some authorities, such as Goldstein (1979), writing from the N.S.W. National Parks and Wildlife Service's point of view, uses the term "education" in favour of "interpretation", having been disillusioned by multi-medium, larger than life extravaganzas which were fashionable in the name of "interpretation" especially in the U.S. in the 1970s. The difference Goldstein draws is primarily a question of semantics, however. The objects of the N.S.W. program of education are

closely similar to those of interpretation in other places: to inspire, to provoke the desire to look more closely but not to instruct.

Fortunately, any rift between "education" on the one hand and "interpretation" on the other seems to be healing:

"Much of what we do ... is too didactic. The real importance ... is in providing a variety of choices. Discovery is the key word. We must look at processes rather than facts and concepts ... let people form their own concepts. Even if they don't learn a lot they have exercised their creativity, and formed questions in their minds ... Parks should be the stimulus ... not fact dispensaries."

These views are those of Bill Taylor, a coordinator of environmental educational programs for the U.S.N.P.S. Interpretation aims to provoke, not to instruct.

4. INTERPRETATION SHOULD BE THEMATIC, THE BEST THEMES HOLISTIC

Freeman Tilden (1957) regards the presentation of a "whole" rather than any part as being the cardinal purpose of interpretation. Tilden sensed visitor interests in interactions and relationships, their fascination with the "whole" picture. He even speculated on the possible metaphysical implications of the search for the "whole", drawing attention to earlier concepts of wholeness:

"They that be whole need not a physician."
(Matt. 9:12)

The word "holistic" has been regularly used in describing effective interpretive presentations in recent years (e.g. Washburne and Wagar 1972), and a number of programs stress the need "... to understand the interrelatedness among man, his culture and his biophysical surroundings." (UNESCO 1975).

Away from the mechanistic business of definition, Goldstein (1979) shows how it can be done:

"... huddled together they listened to a ranger recite legends from the dreamtime. Wierd patterns of light played on the ranger's face from the fire, the persistent rhythm of the sea emphasised the words of great beauty and poetry, creating an atmosphere that bonded the group as they shared the Aborigine's message."

Goldstein (1979)

This is what Freeman Tilden was getting at. Both the experience and description of it bring together all the pieces into a marvellous "whole". For the people involved, all the elements of their biophysical, historic, cultural and social environments had merged for a few moments. They had gained a perception of Kuringai Chase National Park few others could claim.

5. INTERPRETATION IS AN ART FIRST, A MECHANISM SECOND

The example from Goldstein (1979), above, emphasises that interpretation is an art. It reaches into a world where people are involved with their environment, given the opportunity to savour what is partly an emotional and partly an intellectual experience; to really see beauty and meaning in the natural world.

In conservation agencies interpretation programs are developed and executed in environments dominated by the pragmatism, restraint, objectivity and need for detachment of administration, research and operational management of reserves or parks. Sometimes the interpretation is even done by the administrators or the scientists. It is not surprising, given these circumstances, that not all interpretive programs are equally successful. The qualities that are essential to administrators and scientists, expressed in an interpretation program would sink it without trace.

What is written without enthusiasm is doomed to be read with disinterest.

The interpreter's view of the world, on the other hand, is centred on a love for the subject at hand, an active interest in people and an overwhelming desire to communicate the one to the other.

The gulf between the world of the interpreter and his administration has been known to create problems at a number of levels. The need to affect disinterest is sometimes so central to success in the pursuit of science and administration that, to many practitioners of these most worthy professions, any show of emotion is anathema. They cast interpretation into a side pocket where it suffers the frustrations of a necessary evil. At the other extreme the administrator may seek to re-make interpretation in his own image, with even less success.

Organisations which have grappled with these problems with the greatest success do so by recognising interpretation as a craft and its practitioners as skilled artisans who, if they are good communicators, which after all is not unlikely, are equally adept at communicating with management as they are with people. Some are even diplomatic at times. The key lies in remembering that interpretation is firstly an art: an art that can be applied to management and promotion of a nature reserve system.

RECOMMENDATION 2.1

That the Department's interpretation strategy be based on the five principles elucidated in Part Two of this report, namely:

1. *Interpretation is an approach to communication, not simply a means of providing information;*
2. *Interpretation is a "one to one" form of communication which, deftly used, can be achieved through some of the mass media;*
3. *Interpretation is an educational activity, but one intended to inspire, not instruct;*
4. *Interpretation should be thematic, the best themes holistic;
and*
5. *Interpretation is an art which can be applied to the needs of conservation area administration.*

6. AN INTERPRETER'S VIEW OF WESTERN AUSTRALIAN NATURE RESERVES

The Western Australian system of nature reserves is founded on scientific values, a means whereby "... to maintain scientifically interesting and valuable representative associations of native plants and populations of animals" (EPA 1975). Its further objective is to "(acquire) ... a full and permanent cross-section of the State's native floral and faunal assemblages." (McKenzie 1973).

The scientific basis for the establishment of nature reserves is coupled in Western Australia with the separate development of national parks and the pointed exclusion of direct provisions for recreation and other public use in the wildlife conservation legislation. This is not to say either that public use of nature reserves does not occur or that it is automatically discouraged as a precept of management. The high levels of public use to which a number of nature reserves are subject was emphasised most recently by Crook (1982) who proposed a set of guidelines for its orderly incorporation within the nature reserve concept. Those nature reserves on which substantial levels of public use is evident are also valuable focusses for development of some facets of an interpretation program (Parts Three and Four). At this stage, however, it is important to acknowledge the incidental status of public use and recreation in the continuing development of nature reserves in the State. Direct, visitor experience is equally an incidental part of the interpretation program proposed.

1. *Distinguishing public appreciation from public use*

Most interpretive strategies are based on first-hand experience - direct contact between a visitor and the thing which is the subject of interpretation. Interpretation, recognised as such, is frequently an adjunct to public recreation in a park and reserve context, where it is intended to promote visitor perceptions of the environment and to ameliorate specific management problems. While interpretation has its origins in the guidance of direct experience to heighten appreciation, direct experience is not essential to the interpretation process. In the interpretation of the values of conservation reserves first hand experience may be incidental, unattainable or even in contradiction of the values concerned. In such a program the armchair conservationist is very much at home.

The success of the environmental movement in heightening public awareness of conservation issues in Australia, such as the preservation of the rain forests of Tirania Creek and of the wilderness of south-west Tasmania, exemplifies the idea. Aside from the political questions these issues raise, which have no bearing on this discussion, they demonstrate how people's awareness and appreciation can be aroused for things they have never seen and places to which they probably will never go: appreciation from a distance.

This approach to interpretation, based on appreciation of culturally-based values of natural things, and independent of one's actual physical location at the time, is barely recognised as such and even likely to be frowned on by practitioners locked into park-associated and visitor-targeted interpretation programs. On the other hand, it is at least as old and well established as the great natural philosophers Henry David Thoreau and Ralph Waldo Emerson; of poets like John Muir, founder of the Sierra Club, and Robert Frost; of photographers Eliot Porter and Ansel Adams; of musicians like Erin Copland and of painters and sculptors everywhere. A little of its essence was distilled by Joseph Wood Krutch as he was writing about the work of Thoreau:

"One cannot ... begin to 'love Nature' in any profitable sense until one has achieved an empathy, a sense of oneness and of participation. 'Appreciation' means an identification, a sort of mystical experience, religious in the most fundamental sense of the terms."

Joseph Wood Krutch. From Introduction to "In Wilderness is the Preservation of the World" by Eliot Porter.

We have developed this idea at some length because the principles involved go beyond established interpretation "theory" and because the idea of "... appreciation from a distance ..." is so appropriate to a reserve system in which use by people is so evidently a secondary function. We return to, and seek to apply the idea in Part Four of this report.

RECOMMENDATION 2.2

That the interpretation strategy foster and develop the theme of "... appreciation from a distance ..." as being most appropriate both to the needs of interpretation and the primary objectives of nature reserves in the State.

2. Values embodied in nature reserves

There now remains only to expose the values embodied in Western Australian nature reserves which the interpretation program can amplify. The scientific values which underlie their establishment are one such set of values. The research of CSIRO Division of Wildlife and Rangelands Research on the ecology of the noisy scrub bird and by the Western Australian Museum on fauna diversity and nature reserve size, contain a wealth of raw material for the interpreter. They relate directly to the nature reserve system, they each contain numerous fascinating aspects and they were executed by groups outside the Department: there can be no overtones of self-aggrandisement.

However, these and similar research results are not enough to support an interpretation program on their own.

Interpretation to strengthen perception of natural values should be distributed in near-regular new doses of equal quality: periodicals, occasional publications on the theme and broadcasts, radio or television, are ideal media for the purpose. Successive doses reinforce developing ideas, lead to anticipation of those to come and impress by virtue of an appearance of progress. There is not sufficient material available from scientific research alone to maintain an effective program. Scientific values also are relevant to only a limited group of people. A broader cross-section of people can be reached by placing near-equal emphasis on other cultural values embodied in the nature reserve network: historic, archaeological, wilderness, general environmental and natural history values. Each or all of these value systems can be applied to the interpretation program developed in Part Four of this strategy.

RECOMMENDATION 2.3

That, for the purposes of their interpretation, the Department fosters a broad view of the cultural values of nature reserves. In addition to the faunal and floral interest, and the application of these values to research, nature reserves embody historic, archaeological, wilderness, general environmental and a variety of natural history values other than those relating to the "flora and fauna". Recognition of these attributes will broaden the effectiveness of interpretation programs.

PART THREE:
THE INTERPRETATION STRATEGY

The strategy we propose for your consideration is based on three elements:

1. The existing program of interpretive work in operation within the Department;
2. A system of express interpretive planning; and
3. An organisation structure to give effect to 1 and 2.

In deriving this strategy we have found it difficult to totally separate the subject of our brief, "interpretation of nature reserves" from the practice of wildlife interpretation generally. As a result, and for the sake of completeness, the strategy proposed embraces the whole field of wildlife interpretation, in which the interpretation of nature reserves has a prominent part.

1. THE EXISTING PROGRAM

Interpretation through "mass media", from signs and displays to publications of various kinds and through periodic assistance to the broadcast media and the popular press is already being undertaken by the Department. Several Departmental or Department-assisted projects in the wildlife research/nature reserve management fields involve participation of public interest groups. Such programs also have an important interpretive component.

Much of this activity is directly or passingly relevant to the present discussion. The participatory programs, in particular, have functions other than interpretation, while the activities of any member of the Department who has some contact with the public could be construed as having interpretive significance. The following review has been limited to the particular activities of the Wildlife Research Section, the Reserve Management Section and the Extension and Publicity Office which we believe have substantial potential value in the nature reserve interpretation area.

1. S.W.A.N.S.

The "State Wildlife Authority News Service" is the single, most potentially valuable means currently in place through which the Department may interpret its role to the public at large. Considerable changes have been made to S.W.A.N.S. since 1980, both in presentation and editorial direction. The latter are embodied in relegation of the full title in favour of a subtitle "Wildlife Journal" on the cover. Changes in presentation have been no less dramatic, there being a substantially greater emphasis on colour coupled with a modern offset-printing style. Proposals for association of the Royal Australian Ornithologists Union in preparation and distribution of S.W.A.N.S. (J. Lane, pers. comm.) would represent a further step away from a "news service" toward a "wildlife magazine" concept for S.W.A.N.S.

The role of S.W.A.N.S. in the overall interpretive effort is to a large degree dependent on clarification of editorial direction. For the purpose of this strategy it is assumed that it can continue to be developed as a medium of central importance.

2. *Management Plans*

The Department's commitment to public consultation in development of management programs for nature reserves (WAWA 1981) adds considerably to the interpretive potential of management planning. For the present, however, management plans themselves do not fulfil all the promise held out by the planning process outline. The plans are technical documents too difficult to hold the attention of a member of the public with passing interest. In other respects, however, the planning process includes valuable interpretive devices. Active encouragement of local community involvement, provision for feedback of Departmental response to submissions (through publication of "audits" of submissions) and follow-up by maintenance of "post-planning" contact with reserve neighbours and local interest groups help establish the management planning process as a focal point of participatory interpretation for nature reserve "users" and local communities.

3. *Occasional Publications*

The Department has produced few occasional publications in the popular wildlife/nature reserve arena in the past two years. The most notable is the "Rare Western Australian Plants" leaflet series. This is a most informative series; like posters and similar "short-life" media, the fact of their priority lends interpretive weight to their content. The distribution of the series has been via S.W.A.N.S. advertising and by direct request.

The leaflet "Magpies and how to live with them" represents a second kind of occasional publication. It is directed at a particular target audience. Its potential impact and method of distribution suits the medium.

The projected nature reserve guide series, a pilot example of which is being prepared by us as a separate commission from your Department, and similar popular publications of lasting value, such as "Nature Conservation in Western Australia" and "Orchids of the Perth region" fall into a third category. The interpretive potential of publications of this kind, supported by an authoritative, professionally-based Department is very substantial.

4. *Newspaper Publicity and Support of the Broadcast Media*

Activities of the Wildlife Research Branch lend themselves as subjects of interest to the "news" media. Good advantage has been taken of personal associations with newspaper journalists to foster coverage of newsworthy events such as biological survey expeditions and discoveries of populations of scarce animals and plants.

Personal associations have allowed similar initiatives to blossom in the broadcast media from time to time.

Generally, however, Departmental policy precludes officers initiating press, radio or television publicity. Officers are permitted to react to press enquiries on their own discretion in "technical" matters. Where Departmental policy or matters with political connotations are involved, Departmental officers are obliged not to speak. As media for general use, therefore, press, radio and television have played a small part in interpretive activities of the Department.

5. *On-Site Media*

This group of media covers facilities with an interpretive component available on nature reserves themselves. Initiatives engaged include the development, or support of development, of facilities such as picnic sites and areas where camping is permitted, provision of nature trails and walking tracks for public use, provision of supporting leaflet and booklet guides and the provision of signs and displays of various kinds.

"Signs and displays" is the only medium in this group for which a standard has been developed and documented (Crook 1982). Signs conforming to the new standard have a particularly positive interpretive impact. They highlight the existence of a nature reserve "system" in a way which harmonises with their surroundings and the objectives of nature reserve management. They are also distinctive and attract attention of people to whom they are directed. The success of the new standard is exemplified in the high proportion of visitors to Two Peoples Bay Nature Reserve (70%), surveyed during the 1982-83 Christmas-New Year holiday who identified "signs" as the source of their knowledge of the status of the area as a nature reserve.

In addition to this "implicit" interpretive function the standard recognises the potential explicit interpretive role of signs, from simple examples such as signs reading "no path - erosion area" to more elaborate displays.

Participatory facilities such as nature trails, focal developments to help concentrate public use and people-channelling techniques involving direct interpretive activities are less well-developed. Examples of each are in operation on nature reserves in the State, however. Documentation of policy and guidelines for "on-site" interpretive facilities, parallel to those developed for the signs standard is a pre-requisite to their finding an appropriate place in the overall strategy.

6. *Participatory Research and Survey Projects*

The Department has a well-established policy of encouraging amateur study of flora, fauna and nature reserves. This has frequently had an expeditionary basis and involved both individuals and groups such as the

Western Australian Naturalists' Club. More recently two large-scale survey projects have emerged which have potential interpretive spin-off: the Atlas of the Western Australian Flora, run by the Department with amateur support (S. Hopper, coordinator) and the R.A.O.U. wetland nature reserve waterbird use study, which is run by the amateur group with the material assistance of the Department (J. Lane, coordinator).

In provision of feedback to participants, developed to a fine level in the "flora atlas" and self management of a Government-assisted project (the waterbird study), these programs are of international standard. They are deserving of promotion in their own right; they provide ready-made "target" groups and, frequently, independent voices through which the Department can speak; and the techniques involved can be readily transferred to public participation projects with primarily interpretive objectives. Vincent Serventy's annual "Australia Day bird count" promoted throughout Australia via *The Bulletin* and *Wildlife in Australia* is an example of participatory research for primarily interpretive purposes.

RECOMMENDATION 3.1

That the Department note the diverse range of products of high quality which have directly interpretive functions or major "spin-off" value to interpretation and which are already being produced by its members. These include a range of publications, the nature reserve management planning process and surveys and research activities involving participation of amateur interest groups.

2. INTERPRETIVE PLANNING

"Planning" in various guises is used throughout the world of conservation area management as a means of rationalising use of resources in relation to goals. Its importance was heavily underlined by George B. Hartzog, former Director of the U.S. National Parks Service at the Second World Conference on National Parks in 1972:

"... A great many failures in park management can be traced directly to a lack of proper planning. There should be no development in a national park in advance of planning."

At the other extreme to management failures in its absence, some conservation agencies are well on the way to making planning an end in itself. In some instances it is employed as a bureaucratic straitjacket to minimise development and expenditure. In others, endless planning is a substitute for leadership. Between the extremes is a neat balance which is individual to each agency and each purpose to which planning is directed.

The idea of interpretive planning is well established in the United Kingdom and North America. In 1975 Don Aldridge established the principle of formal interpretive planning in the British Countryside Commission with his book "Principles of countryside interpretation and interpretive planning". During the same year John MacFarlane laid the groundwork for a sophisticated, but admirably simple interpretive planning procedure for Parks Canada through his "Interpretive plan for the seven national parks of the Canadian cordillera".

Beginning with the global objectives recommended for the Department by way of definition of interpretation (p. 10), interpretive planning is a means by which to address (and to ensure they are addressed) the following questions:

- What are the particular objectives of the program?
- What are the best means of achieving those objectives?
- How do the answers fit with the overall Departmental strategy for interpretation? and
- How well does the finished program meet the objectives set for it?

Several of the activities of your Department in the nature reserve and general wildlife interpretive area would benefit from express planning and review of this kind. The management planning process, for example, is unlikely to achieve its full interpretive potential - of involvement of local, commonly farming communities, while ever it is based wholly on documents pitched at a technical/administrative audience. While the objectives of interpretation are reasonably well stated in the planning process (WAWA 1981), the means of their achievement are not all in place.

Concerning on-site media and facilities, there appears from our viewpoint to be a gap between policy and the position on the ground. In conformation to statute, and by inclination, the Department is averse to promotion of public use on nature reserves, especially for recreation purposes. Set against this intent there are a number of nature reserves, among them some important examples, where the Department provides, supports or condones development of a wide range of facilities, mostly recreational. Two Peoples Bay Nature Reserve, Boyagin, Overshot Hill, Nilgen, Dumblebung Lake, Lake Wannamal and a number of others, are examples where the public can easily perceive inconsistency in the messages they receive, an occurrence which is always detrimental to the objectives of interpretation.

Each of these, and similar problems in allied areas, would respond to express planning of the kind envisaged.

RECOMMENDATION 3.2

That, to improve the effect of existing activities, and to better integrate such new ones as may be required, the Department adopt a practice of express interpretive planning, addressing the questions:

- *What are the objectives of the proposed activity?*
- *What are the best means of their fulfilment?*
- *How does the activity fit with the overall Departmental strategy? and, when complete*
- *How well does the product meet the objectives set for it?*

3. ALTERNATIVE APPROACHES TO INTERPRETIVE PLANNING

There are two models on which Departmental interpretive planning could be based. The first is used by the U.S.N.P.S. It is founded on the pre-supposition that interpretation is a major objective of management. Interpretation is an end in itself, and planning begins from that point:

"The Master Plan deals with the what and where of interpretation while the Interpretive Prospectus describes the how."

Interpretive Planning Handbook
U.S.N.P.S.

The U.S.N.P.S. approach is tailored to site interpretation in a well-developed, locally-based management system. No objective beyond the self-justifying one that "it is interpretation" is required, and provisions for review and coordination between programs are not necessarily applied. In the Western Australian situation this kind of "what, where and how" planning could be applied with good effect. The absence of provisions for review and coordination could, however, easily lead to the recurrence of the kinds of problems identified above.

The alternative proposal is for a planning system based on a hierarchy of objectives, modelled on the one used by Parks Canada. Beginning with a global set of objectives of interpretation (level 1) the Parks Canada approach defines regional perspectives (level 2), individual park plans of interpretation (level 3) and finally a series of "management unit plans" (level 4). The last are equivalent to plans for individual publications. Each set of planning documents is brief, sufficient to permit rapid verification and review of consistency of objectives and perspectives between levels. The degree of constraint on creativity is minimal, the express purpose being to foster individuality of application within the objectives set. In deriving the backbone of the system MacFarlane (1975) identified "an alarming tendency for programs to be similar in style and content" in Canadian national parks. The result encourages initiative with the least possible constraint.

This approach was developed for the planning of on-site facilities in a system of national parks which crosses the near ultimate diversity of climatic, geophysical, biotic and cultural regions which is Canada. Your Department has different needs, of which on-site interpretive facilities is one. Several factors of your situation, however, are similar in concept to that faced by Parks Canada:

- Your needs cross a diverse range of programs and activities;
- There is a demonstrated need for express planning and coordination of operational conditions with policies;
- As interpretive programs develop, the need for some level of coordination between programs will become more acute; and
- The structure of your Department is consistent with, and requires maximum allowance for individuality.

RECOMMENDATION 3.3

That the Department adopt a form of interpretive planning adapted from that used by Parks Canada (page 27) to suit its broader needs, including the need for coordination of activities of a number of responsible sections, without detracting from the individuality of this expression.

4. THE STRATEGY PROPOSAL IN OUTLINE

The Department's present interpretation program, including associated activities with a major interpretive component, such as management planning, falls naturally into four streams:

- a local community program;
- a site-related nature reserve program;
- general public interpretation; and
- an amateur participation (naturalist) program.

The addition of one other, interpretation directed specially at children would complete the coverage of major interest groups.

Each stream of activities has a major focus and a responsible office or section. The local community and site-related programs are logically based on management planning, and are the responsibility of the Reserve Management Section of the Wildlife Research Branch. The concept of amateur participation in survey and research is an ideal focus for a "naturalist" program for special interest groups. These are a function of the Wildlife Research Branch. Through its responsibility for publications of general interest, including S.W.A.N.S., the Extension and Publicity Office is an ideal focal point for the "general community" program.

Interpretive planning to a master plan level for each of these streams is complete with a statement of objectives (to be consistent with a global set of objectives, such as those described on p. 10), provision for periodic review of objectives and provision for coordination of action between streams (Fig. 1).

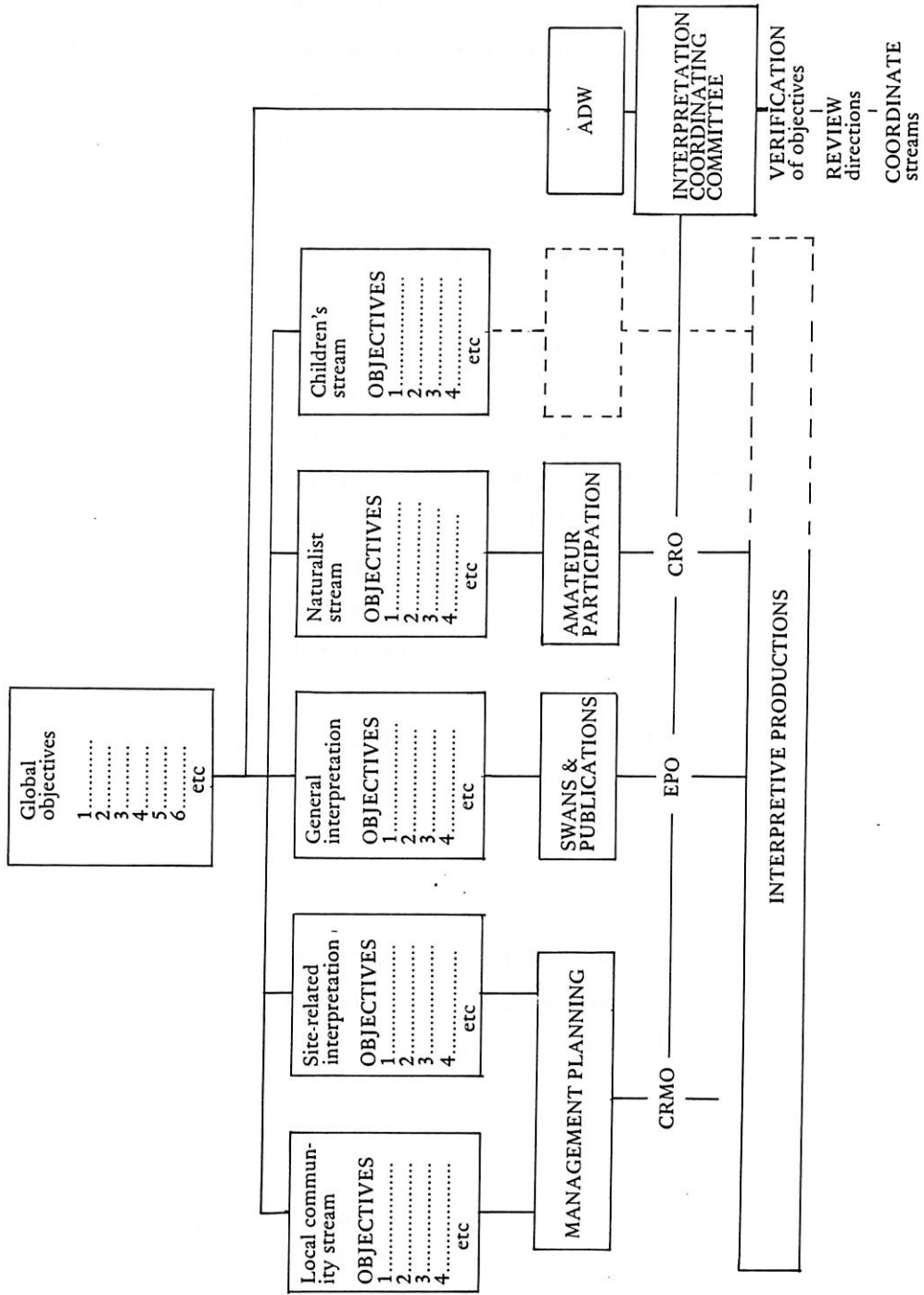


Fig.1 Proposed organisational structure for wildlife interpretation for the Western Australian Department of Fisheries and Wildlife

The need for some emphasis on coordination is apparent in the growing number of proposed projects which cross stream boundaries. Nature reserve guides are "site-related" and arise logically from management planning, but they also have "general community" application. Proposals for books such as "Orchids of the Perth region" have arisen from the "naturalist" program, and these have both "site-related" and "general community" connotations. The proposed book "Conservation in Western Australia", at present a Wildlife Research Centre initiative, may benefit from a broader base of objectives than is presently being applied.

Planning for interpretation below the master plan level can proceed separately within each stream, the major development proposed being provision of a Wildlife Interpretation Coordinating Committee to guide development and review of objectives as required, to review products in relation to objectives and to facilitate coordination of activities between streams. Such a committee would logically consist of the senior officers of each section responsible for interpretive work, i.e. the Chief Research Officer (Wildlife), the Chief Reserve Management Officer and the Extension and Publicity Officer. The Committee could be chaired by the Assistant Director Wildlife and provision could be made for coopting interpretation specialists as required.

The coordinating committee proposal completes the organisational structure of a potentially very powerful interpretation unit for your Department, which is summarised figuratively in Fig. 1.

RECOMMENDATION 3.4

- That the Department's interpretive activities be maintained in four separate streams as the responsibilities of appropriate Sections, viz.:*
- *General public interpretation [Extension and Publicity Office];*
 - *a local community, nature reserve program [Reserve Management Section];*
 - *a site-related nature reserve program [Reserve Management Section/Extension and Publicity Office];*
 - *an amateur participation (research and survey) program [Wildlife Research Section].*

RECOMMENDATION 3.5

That the necessary coordination and planning of these programs be effected by establishment of a Wildlife Interpretation Coordinating Committee under the Chairmanship of the Assistant Director, Wildlife, thus completing an organisational structure such as that illustrated on page 29 (Fig. 1).

PART FOUR:
GIVING EFFECT TO THE INTERPRETIVE STRATEGY
IN THE NATURE RESERVE AREA

Using the Departmental interpretive strategy and organisation proposed in Part Three as a base, we are now able to look at requirements for nature reserve interpretation in more detail. This final part of our report deals with interpretation within the local community and site-related streams of interpretive activity, as proposed, under the following headings:

- present activities;
- objectives;
- media selection;
- draft program.

1. THE LOCAL COMMUNITY PROGRAM

1. *Present Activities*

Interpretation within the local community, insofar as nature reserves are concerned, is presently centred on the management planning process. (It is recognised that the Wildlife Inspection Branch has a major role to play in relating the Department's activities to the public. Much of this is done at a local community/District Wildlife Officer level and includes law enforcement/ public relations activities with respect of nature reserves. Although it comes under the blanket heading of "interpretation" as defined, it is outside our brief and is not further taken into account directly in this discussion.)

The management planning process was outlined in the 1981 Annual Report of the W.A. Wildlife Authority (W.A.W.A. 1981) and more comprehensive documentation is in preparation (I. Crook, pers. comm.) The process calls for "... full consultation with the public and for promotion of draft plans to encourage public comment". It further requires "... special provision (to be made) for consultation with reserve neighbours and members of the public in the districts in which the subject reserves occur." In addition to these provisions for consultation, the process allows for "... essential feedback to the public who have made contribution and submission in the draft stage of each plan." The feedback

takes the form of an "Audit of public submissions and amendments to the draft plan" produced as part of the management plan documentation (WAWA 1981).

This level of provision for public participation is unusual in Australian conservation area management. Davey (1982) in a review of public participation in planning in Australia, a development of the 1981 draft plan of management for Kosciusko National Park drawn up by the N.S.W. National Parks and Wildlife Service, identified your planning system as one of two in Australia which provide "... encouraging examples of extensive public input", and as the only one with formal provision for feedback:

"Public participation is likely to be much more constructive and credible if it is accompanied by reporting back to the public on how their input was used. This is standard practice in North America, but only the Department of Fisheries and Wildlife in Western Australia has adopted it here."

Davey (1982)

Adrian Davey noted a second unusual feature of the Department's planning process in his report, the attributing of management plans to individuals as authors, but failed, in this case, to glean the interpretive significance of doing so. Many members of the public who are reluctant to initiate correspondence with a bureaucratic organisation may be more inclined to do so if they recognise the connection with a particular individual, especially when local people are involved and the individual has been active in their community during the preparation of the plan.

We conclude that the existing management planning process, especially in its application to nature reserves in local authority regions, is a particularly suitable vehicle through which to initiate local community interpretation programs. The process does not allow for maintenance of a program after planning is complete, but provisions to do so can be included in the management plans themselves. The Lake Magenta Nature Reserve management plan, for example, includes provision for establishment of a management advisory committee of mainly local members (Crook and Burbidge 1982) and all plans contain invitations to reserve neighbours to "... draw the attention of the Director of Fisheries and Wildlife to ... inadequacies ... (in management)". The Reserve Management Section

has also been experimenting with ways of maintaining neighbour contact. Personal correspondence of a "newsletter" type is maintained with neighbours of some reserves on an experimental basis, and novel, eye-catching devices have been used to distribute telephone contact sheets "in case of fire" to neighbours of nature reserves (Fig. 2).

2. Objectives

The following proposed objectives for local community interpretation programs have been developed in consultation with the Chief Reserve Management Officer:

1. To promote appreciation and respect for nature reserves among members of the local community in which they are situated, thereby facilitating the good management of those reserves;
2. To promote understanding of the role of the Department of Fisheries and Wildlife in the management of local nature reserves and of the ways in which Departmental Officers may interact with community members; and
3. To foster the concept of nature reserves in the region as a beneficial resource of land set aside for the protection of flora and fauna which is free of uses, including recreational uses, which might be deleterious to this primary purpose.

3. Media

A "medium" in this context is defined as a specific device or method of communication used for interpreting nature reserves to the public. There is a very wide range of media that can be applied to the purpose. In selecting ones especially suitable to a local community program, we have been particularly aware of formative work done in Canada on determination of appropriate media for effective interpretation (Algar 1976). From this study it is perfectly clear that personal contact has far greater potential for influencing cognitive and affective behaviour than any of the "mass media". Local communities are small, discrete, easily recognised and their members easily identified and contacted. The local community provides the best opportunity available to your Department to personalise interpretation in the wildlife/nature reserve area of its activities. There is a nearly exact parallel here to the personal approach your Department applies to management of the fishing industry in Western Australia with such a high level of success.



Fig.2 An example of imaginative interpretation at work for the Department: The cover of a booklet distributed to neighbours of Thomsons Lake Nature Reserve.

From personal contact it becomes easy to distribute interpretive literature to local people. These mass media productions can be "borrowed" to good effect for a local community program from other streams of interpretive activity. The issue of relevance is easily covered by an accompanying personalised rationalisation of interest to the individual concerned, viz.:

"Dear Joe,
I thought you might like to see this booklet. The reserves concerned are not in your area, but the approach to management is similar etc.

"Joe" will have no trouble identifying his interest in such a booklet.

4. *The Proposed Program*

Considering the objectives and media suitability we believe the management planning process to be the best possible basis for initiating or revitalising local community interpretation programs. Management plans can be used to nominate means of continuing the program after planning is complete. The local community has the opportunity to influence this direction during the planning process. We have seen only two deficiencies which detract from the value of the planning process to interpretation:

- The management plan itself is not suitable for local community use. The plans we have read are too long and too technical for the layman to identify with readily; and
- Plans should be prepared for areas where the Department can establish and maintain a reasonable range of active management services. They should have something to offer. The interpretive value of admitting inability to assist with fire suppression on the subject nature reserves until some indeterminate future time, for example (e.g. Crook *et al.* 1982) is quite limited.

We therefore recommend as follows:

RECOMMENDATION 4.1

That local community interpretation programs continue to be developed based on the management planning process.

RECOMMENDATION 4.2

That management plans be prepared subsequent to establishment of adequate resources for active management of the reserves concerned.

RECOMMENDATION 4.3

That the personal component in local community contacts be maximised, both during and following planning.

RECOMMENDATION 4.4

That methods of maintaining local interpretive effort following completion of the planning process be routinely included as a subject of provisions of management plans.

RECOMMENDATION 4.5

That the full documentation of the planning process, now in preparation, recognises and develops its interpretive role.

RECOMMENDATION 4.6

That management plans be supported with popular summaries, in leaflet or small booklet form, which highlight the major features of the reserves concerned and the provisions for their management. This popular material should be prepared by a communications professional.

2. SITE-RELATED INTERPRETATION

Site-related interpretation is defined as interpretation of nature reserves, singly or in groups, and of features of nature reserves, particularly of their flora and fauna, to the public in general. There are two main subdivisions in this stream: direct on-site interpretation, and indirect site-related interpretation, in which the media used are self-contained and do not require the person to whom they are directed to be on the nature reserve itself. The latter we have distinguished with the term "off-site" interpretation. Signs and nature trails are examples of on-site interpretive devices. Audio-visual presentations about nature reserves are examples of the off-site alternative, while publications about nature reserves and features of nature reserves, such as elements of the flora and fauna, may serve a dual role.

1. *The Present Activities*

Present activities in this field are less cohesive than is the case for the local community program, although a start has been made in drawing them together with general guidelines such as the signs standard and for particular reserves through provisions of management plans.

It is important to realise at this stage that all human-inspired developments on nature reserves have some interpretive effect. A nature trail, for example, provides opportunities for the public to learn more about the environment and as such it is an interpretive device. However the signs, paths and other accoutrements which constitute the trail have an interpretive function in themselves. If they are neat, well designed and harmonise with the environment, the visitor using the trail, and the one who does not, will go away with a perception of the facility in his mind and a good impression of the reserve and its management authority. Equally, if the trail is poorly designed, its signs garish or in poor repair, its trails eroding and littered with rubbish, the departing visitor will take confused or negative impressions with him as he leaves.

The same applies with any works of human origin on a reserve, from fences to rubbish dumps, firebreaks to gravel pits, intended developments or not. Whether good or bad all have an interpretive effect. In general terms, therefore, interpretation of nature reserves on site begins with the general management of public use in the broadest sense.

The need for express provisions for management of public use is apparent on many nature reserves in Western Australia where some visitor development has occurred. In a few cases this has been initiated by the Department (e.g. Two Peoples Bay and Thomsons Lake Nature Reserves). Here development is generally in keeping with the purposes of the reserves and is well controlled. It creates a positive and valuable impression of good management. In others, Overshot Hill and Lake Pallarup Nature Reserves, for example, provision of some sorts of facilities has been initiated by local groups and condoned by the Department. These are generally not well designed or well sited and are frequently associated with abuse of the reserve environment.

There is a third group of reserves where development has occurred incidental to or without the knowledge of the Department, either on the reserve or on land close by and indistinguishable from it. Queen Victoria Rocks and Mt. Stirling Nature Reserves are among the many examples of this kind of occurrence.

There is no clear distinguishing line between self-development of things such as primitive picnicking facilities on nature reserves and the beginnings of uncontrolled abuses such as cutting new tracks, rubbish-dumping and even shack-building. All occur on nature reserves and all have an impact on the way people perceive nature reserves.

At the one extreme there is a reserve like Two Peoples Bay. Its use has never been actually promoted by the Department, but it is subjected to an estimated 30 000 or more visitors per year (G. Folley, pers. comm.). The Department has reacted positively and to the benefit of the nature reserve, visitor perceptions of the nature reserve system as a whole, and the Department's role in its management. The management program for Two Peoples Bay is, by definition, good interpretation.

At the other extreme the Department has not reacted so positively. Nature reserves such as Nilgen and some of the wetland duck-shooting areas are used with the same order of intensity as Two Peoples Bay. The results, and the impressions "developments" on these reserves create are not good.

One of the most important principles on which interpretation is based is provocation (p. 13), but provocation can work both ways where on-site impressions are concerned. Two Peoples Bay provokes strong impressions of appreciation and respect for nature reserves. Visitors tend to respond in like manner. The interpretive effect, therefore, is good.

On too many others the effect is the reverse. By benign neglect or poorly considered action, developments have occurred which create strong impressions of disinterest or lack of appreciation by the management authority. The disinterest is echoed and amplified in public reaction. The end result is too often a self-perpetuating cycle of degradation and lack of respect which is always to the public's and the Department's disadvantage. In all cases, however, it is reversible, and examples of

its successful reversal on reserves such as Thomsons Lake and Nammal-katching Well are encouragingly frequent.

Although the Department produces a variety of publications, their deliberate use as interpretation material could be further developed. Periodic articles in S.W.A.N.S. concerning nature reserves and the proposed nature reserve guide series exemplify continuing and new initiatives in the area.

2. Objectives

In framing the objectives of site-related interpretation we have been strongly impressed by the Department's wish not to promote the use of nature reserves, nor to appear to overlap any of the functions of the National Parks Authority. An effective interpretation program requires neither and may even assist in relieving any ambiguities that may already exist in public understanding of the purpose of nature reserves and of the authority responsible for their management. Large numbers of people already visit a relatively small number of nature reserves. Interpretation aimed at existing users is little used, either as a tool of management or as a means of reaping positive public relations benefits. But of at least equal interest is the knowledge that some of the most effective programs of conservation area interpretation are those that begin from the supposition that the person to whom they are directed will never visit, and can never hope to visit the site concerned. This is interpretation directed at the largest body of environmentally concerned people, the so called armchair conservationists. Our use of this term is in no sense pejorative. These are thinking people concerned for the future of their own and their children's worlds. The objectives of the site-related program, therefore, are as follows:

1. To promote public appreciation and respect for nature reserves, both indirectly (i.e. off-site) and on-site, by making use of opportunities incidental to existing visitor use.
2. To promote public understanding of the role of the Department of Fisheries and Wildlife in the management of nature reserves.
3. To foster the concept of the nature reserve as a resource of land set aside for the protection of flora and fauna and which is free of uses, including recreational uses, which might be deleterious to its primary purpose;

- Corollary 3.1: To discourage use of nature reserves or parts of reserves where use would be deleterious to their primary purposes;
 - Corollary 3.2: To encourage appropriate use of nature reserves which do attract public interest, employing interpretation as a means of directly managing public activity; and
4. To encourage "... the study of the natural environment ... and ... flora and fauna" both on selected nature reserves, where use is not deleterious to direct conservation requirements and generally, using examples taken from nature reserves and the flora and fauna of the State to exemplify the rewards of understanding the worlds of nature.

3. *Media*

The media applicable to local community and the more generally applied site-related interpretation are similar, but opportunities for personal contact with the general public are limited in an organisation such as yours with small resources of staff and small likelihood of developing a site-based network of Reserves Officers. A site-related program is therefore necessarily based on mass media, although these do not necessarily rule out some degree of public participation or personal contact in the interpretive process. Encouragement of participation is one of the most important attributes of good interpretation.

There follows a classification of the media that might be applied by your Department, firstly in direct, on-site situations and secondly for indirect, off-site purposes. The listing is illustrative of potential variety, not exhaustive. Each potential medium is then examined in greater detail and rated according to a series of criteria (below) of its interpretive effectiveness.

Finally, by way of introduction, we would stress the very real danger with any list such as this; that it may focus undue attention on the medium itself, rather than its use in telling a story or interpreting a site. It must be stressed most emphatically, therefore, that the media listed in this section are only a means to an end, and should not be used as an end in themselves. To the reader who feels tempted to "go

and write a pamphlet" after scanning this list we offer the suggestion that he "cool it" by reading the earlier parts of this report again. If still he cannot resist the temptation he should at least be able to define precisely why.

4. *Criteria for Evaluation of Media*

The following criteria relate principally to on-site media, but a number are also relevant to indirect media. Each medium or interpretive device listed in the following classification and described in subsequent sections is evaluated in terms of these criteria to provide some impression of its potential and relative value for application in the Western Australian nature reserve situation.

Impact:

The degree of stimulation provided by the medium.

Flexibility:

The extent to which the medium can be adapted, through change of emphasis, design layout, etc. to make it possible to cater for a number of situations, a range of interests or people of varying ages.

Encouragement of participation:

The extent to which the medium enables or encourages active involvement (from walking on a nature trail to touching an exhibit).

Provocation:

How far curiosity is aroused and how far the observer is provoked to discover more for himself.

Relationship to visitor pace:

How far is it possible to cope with people with varying capacities to comprehend and physical capabilities to negotiate a trail, for example.

Use by groups:

The extent to which a medium is suitable for use by large groups.

Visitor safety:

How far the visitor is protected from significant risk in his use of the medium.

Links with surroundings:

How far the visitor is encouraged to explore his immediate surroundings - e.g. to seek out, in the locality, actual examples of objects described.

Relationship with adjacent media:

The degree to which the medium may intrude, require isolation, or at the other extreme complement other media.

Minimum effort:

The degree of effort required. It is generally accepted that interpretation media requiring low levels of effort are likely to be the more successful.

Simplicity:

The ease of installation/introduction, including the need for preliminary research and special design.

Impression/Appearance:

The potential degree of harmony with the environment and objects of reserve management offered by the medium.

Effect on resource:

The extent to which the medium may cause damage, e.g. by erosion, noise, etc.

Durability:

Resistance to weathering and normal wear and tear.

Resistance to vandalism:

Vulnerability to wilful damage.

Reliability:

How far the medium is prone to failure.

Cost:

Relative indication of low capital and operating costs.

Expendability:

The operational ease of maintenance, repair or replacement.

5. Classification of Media

	DIRECT - on-site - [the interpretation of actual objects, natural features, living orga- nisms or processes in their native habitat or natural location]	INDIRECT - off-site - [the interpretation of actual objects, natural features, living organisms or processes, or represen- tations of these away from their native habitat or natural location]
PARTICIPATORY MEDIA [media which assist the person who is prepared to make some effort in seeing or studying natural features, living organisms or processes]	1.1.1 Nature trails	1.2.1 Off-site displays which can be handled
	1.1.2 Observation hides/ towers	1.2.2 Written publications, books and leaflets, of use independent to presence at a site (see 1.1.7)
	1.1.3 Lookouts	1.2.3 Participatory research/ survey projects
	1.1.4 Viewfinders and orien- tation tables	
	1.1.5 Displays that can be handled	
	1.1.6 Identification aids	
	1.1.7 Guide books/leaflets	
STATIC DISPLAY MEDIA [media which facilitate display of inanimate representations of live objects or pro- cesses and which do not include any appreciable element of participation]	2.1.1 Signs and displays	2.2.1 Displays (various)
	2.1.2 In-situ features (artefacts, etc.)	2.2.2 Posters
"GADGETS" [Mechanical, electronic devices, etc. which introduce sound, light or movement to add realism or aid illus- tration]	3.1.1 Portable sound guides	3.2.1 Film strips
	3.1.2 Listening posts, fixed message repeaters	3.2.2 Audio-visual, slide presentations
	3.1.3 Sound guides for vehicles	3.2.3 Cine film/videotape

6. Detailed Descriptions and Assessments of Mdeia

Nature Trails (1.1.1)

DEFINITION: Tracks designed to be followed, usually on foot, by visitors unaided except by means of features such as trail markers. Way-side panels or descriptions in an accompanying guide book or sound recording provide information and encourage visitors to discover the significance of represented features for themselves.

REMARKS: Nature trails are a highly effective method of channelling visitors along preferred routes, and away from sensitive areas. They permit the utmost in flexibility in terms of visitor pace. Trails may be designed to be followed on foot, by vehicles of a variety of kinds or by combinations of vehicle and walking routes. The last may be especially appropriate in some Western Australian situations in dealing with groups of reserves.

A number of methods are available to identify features of interest.

These may also be used singly or in combination:

- Marker posts keyed to, or used to complement, descriptions in an accompanying trail guide book (1.1.7, 1.2.2)
- Written descriptions accompanied or not by line drawings, maps or photographs identifying the route and portions of the trail in the guide book (1.1.7)
- Way-side display panels with descriptive material (2.1.1)
- Sound guides and message repeaters (3.1.1, 3.1.2)

It adds to the variety and novelty value of nature trails, in a media conscious world, if several different methods of communication are used in conjunction with one another. As a simple example it is possible to explain features in a combination of way-side displays and written material in a booklet form. More adventurous, but no more difficult, is a combination of sound recordings, way-side signs and written, printed material. This sort of approach is especially adaptable to combined motor/walking trails, employing vehicle cassette players and tapes as the interpretive medium to describe the general features of the countryside and the route to be taken between a series of reserves where there are walking trails supported by way-side markers. A guide book ties this series of trails and its context of countryside together.

The subject matter of a nature trail may be of general interest or relate to a more specific theme (the evolution of a wetland, historic changes in natural areas, etc.), but these should be decided with regard to both suitability of the environment and type of visitor. In a holiday area, for example, a light, general interest theme is clearly preferable. On a nature reserve where the trail is a central feature, pattern and process can be explored in more depth. Specialised trails have been developed in places. These include trails for the blind employing braille and sound guides and those for older or disabled people where special attention is paid to construction of the trail surface. The sight of a blind child hugging a tree at the behest of a way-side marker written in braille to "feel its strength and craggy bark" can be its own reward.

Flexibility can be increased by providing loose-leaf guides or frequent revisions of trail literature. Display signs may have demountable, replaceable parts. Separate trail guides for different seasons may be appropriate. Even Charles Darwin left Western Australia with a false impression because his visit was in the late summer! If he had had a Department of Fisheries and Wildlife guide at his disposal his subsequent descriptions of the place may not have been as jaundiced.

Motor trails and combined motor/walking trails are most effective when communication is provided in different media associated with the different modes of transport.

EXAMPLES: The classical "post and booklet" trail is exemplified on the Two Peoples Bay Nature Reserve. This is also a good example of a trail in a primarily recreational setting. It is short and easily followed. It could be improved by leading it back to a point closer to its beginning in the recreation area. Nature trails should bring participants "home" to their starting points. Thomsons Lake Nature Reserve combines way-marking of walking tracks with a booklet guide (the booklet being in preparation) and a changeable display at the beginning of each path. By virtue of the displays, these paths are nearly equally useful as self-contained facilities as they are when used in combination with a booklet. A third approach, inviting visitors to find their own routes, is employed on Moondyne Nature Reserve where a booklet (in preparation) identifies features of interest without specifying either where all examples of the

features are or all the possible ways of reaching them. This approach is especially tailored to the walker.

EVALUATION:

<u>Good</u>	<u>Fair</u>	<u>Poor</u>	
		x	Impact
	x	x	Flexibility
	x		Encouragement of participation
x	x	x	Provocation
x			Relationship to visitor pace
x			Use by groups
x	x		Visitor safety
x	x		Links with surroundings
x			Relationship to adjacent media
	x	x	Minimum visitor effort
	x		Simplicity
x	x		Appearance
x	x		Effect on resource
	x		Durability
	x		Resistance to vandalism
x			Reliability
x			Cost
x	x		Expendability

Observation Hides and Towers (1.1.2)

DEFINITION: Carefully sited structures either well screened from view or particularly designed to fit into their surroundings, which permit small groups of visitors to observe and photograph undisturbed wildlife at close range.

REMARKS: Hides are usually enclosed or semi-enclosed timber structures with movable shutter windows or observation slits. These are generally unglazed. There is frequently a ledge for notebooks, cameras and binoculars. Observation ports and ledges may be either at standing or sitting heights. Special provision may be needed for children.

Observation towers, possibly with hides combined, are a less common but potentially very valuable facility, bringing the visitor into touch with the tree canopy in a forest or woodland situation, for example, in a way not otherwise possible.

Both hides and towers are especially useful in combination with nature trails targeted at naturalist visitors (1.1.1).

EXAMPLES: None in use in the Western Australian nature reserve system at present, but a lakeside hide and treetop platform hide have been suggested for Thomsons Lake Nature Reserve. The latter is especially interesting because the terrain in which it is intended to be sited allows for a gently sloping ramp approach, adding to the impact of the change from ground to treetop environment.

EVALUATION:

<u>Good</u>	<u>Fair</u>	<u>Poor</u>	
x			Impact
			Flexibility
x			Encouragement of participation
x	x		Provocation
x			Relationship to visitor pace
		x	Use by groups
	x	x	Visitor safety
x			Links with surroundings
	x		Relationship to adjacent media
	x	x	Minimum visitor effort
	x		Simplicity
x	x		Appearance
	x	x	Effect on resource
x			Durability
	x	x	Resistance to vandalism
x			Reliability
	x	x	Cost
		x	Expendability

Lookouts (1.1.3)

DEFINITION: Generally a viewing platform or area, often associated with a carpark or walking trail, which provides an extensive view and scope for interpretation.

REMARKS: Most frequently used in conjunction with a nature trail (1.1.1), message repeaters (3.1.2), signs and displays (2.1.1) or viewfinders (1.1.4).

EXAMPLES: A scenic lookout is included at the present end point of the Two Peoples Bay nature trail. It illustrates something of the potential

for this kind of facility used in combination with others. It would be further improved with the inclusion of appropriate display information. Two "lookouts" have been built into the cycle trail along the Kwinana foreshore nature reserve. These are yet to be developed but have substantial interpretation potential.

EVALUATION:

<u>Good</u>	<u>Fair</u>	<u>Poor</u>	
	x		Impact
		x	Flexibility
	x	x	Encouragement of participation
	x		Provocation
x			Relationship to visitor pace
	x		Use by groups
	x		Visitor safety
x			Links with surroundings
x			Relationship to adjacent media
x			Minimum visitor effort
	x		Simplicity
x	x		Appearance
x			Effect on resource
x			Durability
x			Resistance to vandalism
x			Reliability
	x		Cost
	x		Expendability

Viewfinders and Orientation Tables (1.1.4)

DEFINITION: Devices, generally used at lookouts, to facilitate identification of distant, fixed objects and features.

REMARKS: Viewfinders employ a variety of devices to point to features. Such devices include direction marks cut in stone along the parapet of a lookout, and fixed telescopes. Orientation tables are frequently "all-round" affairs which can identify the direction of the nearest hilltop or the distance and direction of a town or city.

Not widely applicable in the south-west of Western Australia because of the flat topography, but included here to emphasise the potential of the Two Peoples Bay platform to carry such a facility highlighting the historic associations of the Bay itself, perhaps.

Many novel approaches are made to this kind of facility in places which better lend themselves to picking out the features of a view. Stand-alone displays are frequently combined with panoramic photographs or line drawings in the style of the early surveyor-explorers. These can be printed in guide books or made available in poster form. This once again emphasises the potential interpretive value to be had from use of media in combination.

EXAMPLES: None current in Western Australian nature reserves.

EVALUATION:

<u>Good</u>	<u>Fair</u>	<u>Poor</u>	
	x		Impact
		x	Flexibility
	x		Encouragement of participation
	x		Provocation
x			Relationship to visitor pace
	x	x	Use by groups
x			Visitor safety
x			Links with surroundings
x			Relationship to adjacent media
x			Minimum visitor effort
	x		Simplicity
x	x		Appearance
x			Effect on resource
	x		Durability
	x	x	Resistance to vandalism
x			Reliability
	x		Cost
	x		Expendability

Displays Which Can Be Handled (1.1.5)

DEFINITION: Displays of objects in the locality to which they relate which visitors are permitted or encouraged to touch.

REMARKS: The appreciation of many objects is greatly enhanced if the visitor is able to touch them, and unless the objects are fragile or dangerous this can be encouraged. An appreciation of soil textures, the barks of different trees, surfaces of leaves and the weight and surfaces of rocks of different types may be built up "in the wild" as part of a nature trail sequence (1.1.1). Other kinds of "touchable" items may

require an artificial display situation, also possibly built in to a nature trail. This group includes items such as the casts of animal footprints and cut surfaces of different kinds of woods.

EXAMPLES: None current in Western Australian nature reserves.

EVALUATION:

<u>Good</u>	<u>Fair</u>	<u>Poor</u>	
	x		Impact
x	x	x	Flexibility
x			Encouragement of participation
	x		Provocation
x			Relationship to visitor pace
	x		Use by groups
x			Visitor safety
x			Links with surroundings
x			Relationship to adjacent media
x			Minimum visitor effort
x			Simplicity
x			Appearance
x			Effect on resource
	x		Durability
x	x	x	Resistance to vandalism
x			Reliability
x			Cost
	x		Expendability

On-site Identification Aids (1.1.6)

DEFINITION: Methods by which visitors are assisted with the identification, on-site, of objects and features other than those forming part of a view.

REMARKS: These can have a variety of forms. Descriptive labels, illustrations and displays (2.1.1) which facilitate identification of animals, plants and natural features in general can be placed on nature trails (1.1.1) in hides (1.1.2) and associated with lookouts (1.1.3). Guide books provide a parallel facility in print (1.1.7), while displays which can be handled (1.1.5) add the dimension of touch to the recognition process. These aids are regarded as a medium in their own right because of the potential provocation, and encouragement of further participation, of firstly inviting a visitor to identify a plant, animal, rock or whatever for himself and of providing him with the where-withal to do so successfully.

EXAMPLES: The Two Peoples Bay nature trail guide book is the first site-related aid of this type in use in the Department.

EVALUATION:

<u>Good</u>	<u>Fair</u>	<u>Poor</u>	
	x		Impact
x	x		Flexibility
x			Encouragement of participation
x	x		Provocation
x			Relationship to visitor pace
x	x		Use by groups
x			Visitor safety
x			Links with surroundings
x			Relationship to adjacent media
x	x		Minimum visitor effort
	x		Simplicity
x			Appearance
x			Effect on resource
x	x		Durability
x	x	x	Resistance to vandalism
x			Reliability
x	x		Cost
	x		Expendability

Guides, Books and Leaflets (1.1.7)

DEFINITION: Written or illustrative material in printed form for on-site use which may be complete in itself or complement other media, such as a nature trail (1.1.1) and which facilitates identifications of objects (1.1.6) and encourages visitor participation.

REMARKS: This medium is a broad one and includes such things as trail guides, general descriptive guide books to reserves, groups of reserves or specialist guides to particular features, such as parts of the flora, which draw attention to occurrence and natural history of the feature in the context of nature reserves.

At this point the on-site guide and the self-contained, site-related (off-site) publication (1.2.2) merge, and it is valuable to consider them together under a general heading: "interpretive publications".

Printed publications have a number of disadvantages as a medium for interpretation:

- Publications are "cold". They lack the immediacy of personal contact or the broadcast media. They have a low impact and do not, of themselves, encourage participation;
- Dynamic concepts, such as the interplay of geologic and climatic forces over time scales unfamiliar to the reader, are difficult to convey. Very skilled writers can bring such things to life, but not everyone has the same skills;
- Publications provide no direct feedback (but see comments below on 'sale'). This is a difficulty common to all the mass media;
- Publications can be over-used. Some conservation areas in America and Europe have so many site-related publications that choice becomes a problem and the visitor is daunted by the weight of literature available. Some park facilities even include a book-shop. Western Australia has some distance to go before quantity of publications becomes a problem, but the implications for control of quality need to be faced from the beginning.

On the other hand interpretive publications have many advantages. In some respects their interpretive potential is greater than that of personal contact:

- Publications offer the greatest potential of all the interpretive media for dealing with a subject in depth;
- Publications have "take home" value. They can be read after or in preparation for a visit as well as in conjunction with a visit to a reserve;
- Publications can be distributed widely. They are not restricted to a particular place as are other "on-site" media;
- Manuscripts lend themselves to review and publications to revision, so facilitating procedures for regular updating of contents;
- Publications are economical in time and financial costs, both for preparation and maintenance, compared to the sophisticated exhibit and visitor centre interpretation facilities which they can, potentially, replace;

- Publications lend themselves to portrayal of a "style" appropriate to the management authority, with which it can identify and which it can easily control; and
- Publications have no impact on the environment except for the problems that poorly produced ones cause when they are discarded by dissatisfied visitors.

The variety possible under a general heading of "interpretive publications" is nearly endless. Thematic publications, individual reserve histories and descriptions, publications especially for children, checklists of birds for particular sites and pure information leaflets are a few examples to emphasise the flexibility of a publication-oriented approach to interpretation.

Publications can (and should) be sold. That which is sold is valued and the sale is a form of feedback. Successful interpretation is popular. Numbers of a publication bought by the public is a measure of its success. A publication program is therefore more closely self-supporting, and self-justifying, than any other form of interpretation.

Finally it should be stressed that presentation of publications is most important. Cover designs, type-styles, paper quality, effective use of illustrations, lay-out, tight editing and content all complement one another in a "good" publication. Together they evoke a feeling of satisfaction with the product. Just as "clothes maketh the man" it is a simple matter to gauge a conservation organisation by glancing at its publications. A publication program has a nearly equal potential to be a conservation agency's greatest interpretive asset as it has to cause a bad case of public disinterest or disdain.

EXAMPLES: While the Department has several series of scientific and technical publications relevant to nature reserves there has been little activity in the popular arena. The proposed nature reserve guide series should help begin to set the scene, however, and provide opportunities to answer questions of presentation and distribution.

EVALUATION:

<u>Good</u>	<u>Fair</u>	<u>Poor</u>	
		x	Impact
x	x		Flexibility
x			Encouragement of participation
x	x		Provocation
x			Relationship to visitor pace
x			Use by groups
x			Visitor safety
x	x	x	Links with surroundings
x			Relationship to adjacent media
x			Minimum visitor effort
	x		Simplicity
x			Appearance
x			Effect on resource
x	x	x	Durability
			Resistance to vandalism
x			Reliability
x	x		Cost
			Expendability

Off-site Displays Which Invite Participation (1.2.1)

DEFINITION: Displays in any location containing or consisting of objects which people are encouraged to touch, feel or do something with.

REMARKS: Inclusion of off-site displays in the participatory group of media rests solely on the inclusion of items which visitors can handle or incorporate into some kind of activity. Presence of a stuffed animal, or a rock with an implied or explicit invitation to touch and feel marks the difference between a "cold" display and one with a potential for involvement. See also 2.2.2, below: Posters inviting participation.

EXAMPLES: None current in the Western Australian nature reserve context, but the concept of a children's zoo, where people, especially children, are encouraged to touch and feel animals like lambs and rabbits is a parallel one, as are participatory exhibits mounted by the Western Australian museum.

EVALUATION:

<u>Good</u>	<u>Fair</u>	<u>Poor</u>	
	x		Impact
x	x		Flexibility
x			Encouragement of participation
	x		Provocation
x			Relationship to visitor pace
	x	x	Use by groups
x			Visitor safety
x			Links with surroundings
x			Relationship to adjacent media
x			Minimum visitor effort
x			Simplicity
x			Appearance
x			Effect on resource
	x		Durability
x	x	x	Resistance to vandalism
x			Reliability
x	x		Cost
	x		Expendability

Off-site Publications (1.2.2)

DEFINITION: Written or illustrative material in printed form relating to nature reserves or features of nature reserves specifically for use off-site and intended to increase understanding of aspects of the nature reserve system which it is impractical to experience at first hand.

REMARKS: This medium embraces publications about remote and sensitive parts of the nature reserve system which are "off-limits" for one reason or another to the individual or the public at large.

There is a distinct overlap between publications in this category and "Guides, books and leaflets" intended for on-site use (1.1.7). The general remarks about publications made in that section are equally relevant here.

EXAMPLES: None current for the Western Australian nature reserve system, but there are many examples available from other places, particularly from the more prestigious end of the publications spectrum. Perhaps one of the best to have appeared in recent years is "A Time to Care" by Chris Bell and Norman Sanders (Bell and Sanders 1980) on the subject of south-west Tasmania.

EVALUATION:

<u>Good</u>	<u>Fair</u>	<u>Poor</u>	
		x	Impact
x	x		Flexibility
x	x		Encouragement of participation
x	x		Provocation
x			Relationship to visitor pace
			Use by groups
			Visitor safety
			Links with surroundings
x			Relationship to adjacent media
x	x		Minimum visitor effort
	x		Simplicity
x			Appearance
x			Effect on resource
x	x		Durability
			Resistance to vandalism
x			Reliability
x	x		Cost
	x		Expendability

Participatory Research and Survey Projects (1.2.3)

DEFINITION: Projects supported by the management authority requiring amateur involvement in data collection for research or survey purposes.

REMARKS: Projects in this category may be either primarily or incidentally interpretive in character. Early ones of the type in the United Kingdom and New Zealand sought to enlist public support to broaden the range of (mainly) distribution data for plants and animals. They have been sufficiently successful to bear repeating in other places for other groups of the biota and to act as a springboard for examples with a primarily interpretive function.

The advantages of these activities revolve around their impact and the extent to which they encourage participation and provoke individuals to gain new knowledge and understanding. They can involve a degree of personal contact and provide good opportunities for feedback and maintenance of interest once contact is established.

For projects with primarily interpretive aims, simplicity is the keynote. The approach of the Wildlife Preservation Society of Australia in its

annual, Australia Day garden bird count is a good model. It provokes awareness and invites participation without being overwhelming.

Provision for feedback is the second essential element. The contributor must be informed directly of the results, preferably indicating where his information adds to the overall picture. This is well-developed in your own Atlas of the Western Australia Flora project. Successful adaptation of the participating survey to a primarily interpretive role would require equal emphasis on computer and word-processing technologies.

Promotion is the third ingredient to success. In an area of small population such as Western Australia, projects such as this are especially prone to premature death by starvation. On the other hand, if adequate promotion is allowed for, they can also become more generally popular than could ever be the case in a larger centre.

EXAMPLES: The most widely known is the Australia Day garden bird count hosted by Vincent Serventy's Wildlife Preservation Society. This has not been as widely promoted here as it has in the eastern States, but it is interesting to note (from the standpoint of its potential interpretive, (propaganda) value) that Western Australia has proved itself the only State in which a native species is the most commonly recorded garden bird!

EVALUATION:

<u>Good</u>	<u>Fair</u>	<u>Poor</u>	
x			Impact
x			Flexibility
x			Encouragement of participation
x			Provocation
	x		Relationship to visitor pace
x			Use by groups
			Visitor safety
x			Links with surroundings
x			Relationship to adjacent media
	x	x	Minimum visitor effort
	x	x	Simplicity
x			Appearance
x			Effect on resource
			Durability
			Resistance to vandalism
x			Reliability
	x		Cost
x			Expendability

Signs and Displays (2.1.1)

DEFINITION: Written and graphic material displayed outdoors on signs, panels, notices, display-boards and similar surfaces.

REMARKS: Signs are the earliest and one of the most important interpretive devices to come into use in the management of all conservation areas. They are a complex subject in their own right and can lay a good foundation for, or hinder any interpretation program that develops subsequently. Fortunately the subject has been well broached for the Western Australian nature reserve system in the adoption by the Wildlife Authority of the "Signs standard for use in the management of nature reserves in Western Australia" (Crook 1982).

The approach embodies the main accepted attributes of "good" conservation area signs, such as consistency, harmony, brevity and positivity, and it goes to unusual lengths compared with similar "standards" documents from other organisations, to begin to document the principles underlying them. In doing so the Western Australian standard creates a valuable basis both for the further development of use and design of signs and for the development of the principles of signs design. The Western Australian standard is a valuable starting point for an on-site nature reserve interpretation program.

Displays are less well developed, but suitable material will include printed text and labels for photographs, aerial photographs, sketches and maps. For most visitors perspective drawings are more readily understood than scale plans, but in all cases the success of a "displays" program is dependent on the effective use of graphics.

EXAMPLES: Examples of signs are well covered in the signs standard. Two on-site displays are in place in the nature reserve system: one is at Two Peoples Bay, the other at Thomsons Lake.

EVALUATION:

<u>Good</u>	<u>Fair</u>	<u>Poor</u>	
	x	x	Impact
	x	x	Flexibility
			Encouragement of participation
	x	x	Provocation
x			Relationship to visitor pace
	x		Use by groups
x			Visitor safety
	x		Links with surroundings
x			Relationship to adjacent media
x			Minimum visitor effort
x			Simplicity [as applied]
x			Appearance [as applied]
x			Effect on resource
	x		
	x	x	Durability
		x	Resistance to vandalism
x			Reliability
x			Cost
	x	x	Expendability

In-situ Features (2.1.2)

DEFINITION: Large objects and natural features displayed in their original position and which form the basis for the interpretation of an entire site, or part of a site.

REMARKS: Included under this heading are archaeological remains, historic features and other large objects which are interpreted in-situ and which form a dominant feature of the site. (Smaller objects which are displayed in-situ are included in category 1.1.5.). In some instances parts of the objects may be touched or handled, and might be considered as participatory media, but the degree of participation will be largely incidental to the primary objective, i.e. that of interpreting the significance of the site as a place where something happened.

EXAMPLES: Aboriginal artefacts, burial sites, historic wells, old buildings, monoliths and dominating natural features are common on nature reserves in the State and present many opportunities for interpretation, either as the centre-pieces or ancillary parts of the program for the reserves concerned.

EVALUATION:

<u>Good</u>	<u>Fair</u>	<u>Poor</u>	
	x		Impact
		x	Flexibility
			Encouragement of participation
	x		Provocation
x			Relationship to visitor pace
x	x		Use by groups
x			Visitor safety
x			Links with surroundings
x			Relationship to adjacent media
x			Minimum visitor effort
			Simplicity
			Appearance
			Effect on resource
x			Durability
	x	x	Resistance to vandalism
			Reliability
			Cost
			Expendability

Off-site Displays, Various (2.2.1)

DEFINITION: Written or illustrative material of a static nature, generally displayed indoors on wallboards, panels, tables and similar surfaces.

REMARKS: A very broad category. The material displayed may be similar to that described under the heading of on-site displays (2.1.1), but for indoor use a wider variety of methods of display are available. The subject can cover things such as illustrative panels, mounted transparencies, fixed and encased three-dimensional exhibits, small and large-scale dioramas and reconstructions of various kinds.

Displays are a "cold" medium, their impact is totally dependent on quality of design, and design, as is the case with outdoor displays, depends on quality of graphics.

They have poor flexibility - a display on the one subject cannot be changed to suit new requirements, and they tend to be expensive both to build and maintain. Finally, they have low resistance to damage and vandalism.

On the other hand off-site displays can provoke awareness and allow an authority to present itself in unlikely environments, such as agricultural shows, festivals and similar occasions where large numbers of people with diverse interests gather in the one place.

The advantages and disadvantages of static, off-site displays nearly cancel one another out, and the decisive factor in the emphasis or lack of it on the medium in any program of interpretation generally rests on the availability of a person or team with the exacting skills required to make displays work. Training and aptitude in design and the graphic arts are an essential beginning.

EXAMPLES: The Department maintains a number of portable displays highlighting wildlife themes and contributes material to regular calendar events such as the Kings Park Board Wildflower Display.

EVALUATION:

<u>Good</u>	<u>Fair</u>	<u>Poor</u>	
	x	x	Impact
	x	x	Flexibility
			Encouragement of participation
	x		Provocation
x			Relationship to visitor pace
	x	x	Use by groups
x			Visitor safety
	x		Links with surroundings
x			Relationship to adjacent media
x			Minimum visitor effort
x			Simplicity
x			Appearance
x			Effect on resource
	x		Durability
		x	Resistance to vandalism
x			Reliability
x			Cost
x			Expendability

Posters (2.2.2)

DEFINITION: Principally illustrative material in the form of static displays reproduced, by printing or similar means, for mass distribution.

REMARKS: The poster is a form of static indoor display (2.2.1) which also has some of the characteristics of an off-site publication (1.2.2). The poster is dealt with separately in this discussion both because of the Department's expressed interest and its potential value as a medium for interpretation.

Posters for purely decorative purposes share some of the disadvantages of both displays and publications. They are a "cold" medium, inflexible in many applications and have limited potential to encourage participation. Their greatest advantages are simplicity and cost effectiveness when sold. A good decorative poster can be produced with minimal preliminary research, and a well-designed example will reflect well on the originating authority.

Under some circumstances, by its own design or its association with other media in "kit" form, the poster can encourage participation to a much greater degree than most other types of display. This is especially so in school situations. Younger children are attracted to large colourful objects and are always ready to participate in projects, the creation of scrap-books and the colouring in of drawings. Teachers rarely have enough suitable poster-style material to fulfil their pupils' needs. Designed in consultation with the education authority, with the intention of inviting their use as resource material for school projects, posters can form a most important part of a children's interpretive program.

Equally, posters for colouring and those which invite other kinds of play or competition can capture children's (and their parent's) attention very effectively in school holiday times. An example of this potential use of the poster as a medium is shown in Fig. 3. These are special applications of the poster which bring it into close analogy with the "off-site displays which can be handled" (1.2.1) category.

EXAMPLES: Two posters, one on the native flora and the other featuring Western Australian mammals, are in preparation by the Department. Both are primarily decorative in nature but could be used with supporting written or audio-visual media to very good effect.

EVALUATION: The "poster" has parallel characteristics to off-site displays, either 1.2.1 or 2.2.1 depending on participation potential.

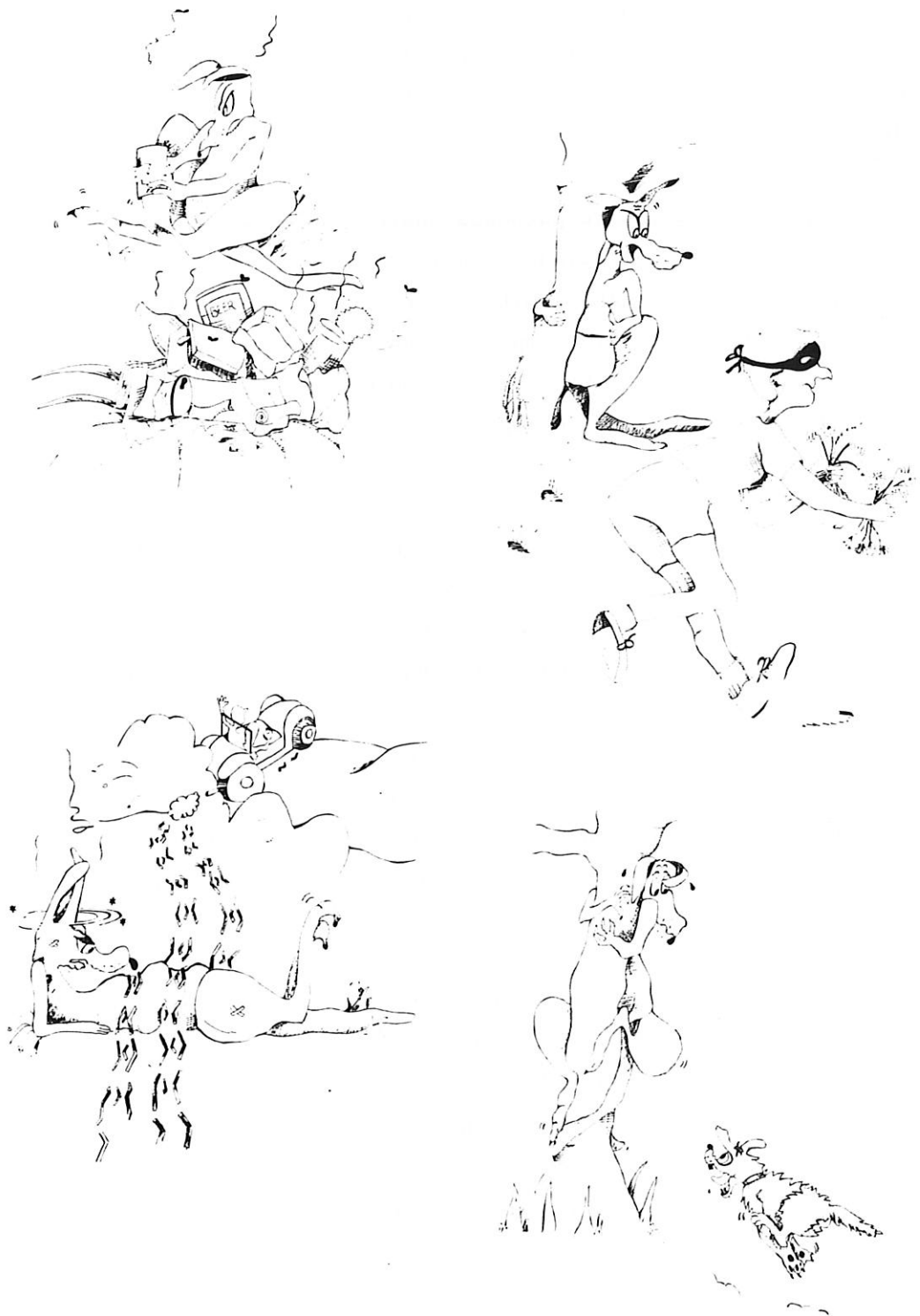


Fig.3 Part of a series of drawings which has been designed as a display for use on nature reserves subject to high intensities of use. It also has potential as a poster or, if coloured, in a brochure.

Portable Sound Guides (3.1.1)

DEFINITION: Devices designed to be carried by a visitor on foot which provide a broadcast or recorded message or interpretive commentary about a site or area.

REMARKS: Also known as "audio guides" this kind of device can take a variety of forms. Low power radio transmissions in the broadcast band or at special frequencies and tape recordings are the main kinds. Many of the variations involve origins of the receiving/playing equipment. In the Western Australian nature reserve context the production of cassette tapes for playing on "visitor's" own cassette players would be the only immediately practical application.

The term "visitor" is here placed in quotes because of the potential for off-site use of such tapes and for their use by handicapped, especially blind people.

Sound guides are another medium, like displays, which require special skills to produce. In this instance the skills involved are the same as those of radio broadcasting. A professional product is likely to be well received. An amateur one would at best be regarded as "quaint".

Sound guides may be produced in conjunction with a map, booklet or nature trail and nature trail guide (1.1.1, 1.1.7, 1.2.2 and see also sound guides for vehicles - 3.1.3). Their greatest advantage lies in the introduction of a new sense (hearing) to other interpretive media such as complex displays or nature trails. On a nature trail a sound guide can facilitate identification of bird song or release a visitor's eyes from the reading of some kind of guide for part of the time, allowing him to concentrate solely on seeing his surroundings.

EXAMPLES: None current in Western Australia. The N.Z. Wildlife Service and some similar organisations publish recorded collections of bird song, but sound guides for visitors to conservation areas are rare outside North America and Europe.

EVALUATION:

<u>Good</u>	<u>Fair</u>	<u>Poor</u>	
	x		Impact
		x	Flexibility
	x		Encouragement of participation
	x		Provocation
	x	x	Relationship to visitor pace
x			Use by groups
x	x		Visitor safety
x	x		Links with surroundings
x			Relationship to adjacent media
x	x		Minimum visitor effort
		x	Simplicity
x			Appearance
x			Effect on resource
	x		Durability
	x	x	Resistance to vandalism
			Reliability
		x	Cost
		x	Expendability

Listening Posts, Fixed Message Repeaters (3.1.2)

DEFINITION: Devices, fixed to a site or feature being interpreted, which provide a broadcast or recorded message, or interpretive commentary.

REMARKS: These devices, which may also be referred to as 'talking labels' or 'audio stations', are in some respects similar to sound guides of the portable type but are fixed to a post, display, or some other object. A specific commentary is provided to describe what can be seen at that point. This commentary is often of short duration but a somewhat longer description can be attempted in a broadcast than a written medium.

As with 3.1.1 the rules of radio broadcast communication apply. As well as giving a straightforward description of what the visitor can see, this medium may be used to enhance the atmosphere of a place, possibly with an account of conditions there at a different period.

The commentary is generally only loud enough to be heard by a small group near the machine. Cup earphones on a lead may sometimes be provided. Most of the playing equipment may well be located at some distance, the parts at the site being limited to a loudspeaker or simple receiver.

This may operate continuously at a fixed time interval, or may be operated by pressing a button, or by the drop of a coin.

EXAMPLES: The "listening post" part of the Two Peoples Bay noisy scrub bird display must have been one of the few of the kind in Western Australia. It is a pity that the worn out tape and equipment have not been able to be replaced. Its success and the number of questions the Reserves Officer fields concerning its fate are indicative of the potential for the broadcast media generally (3.1.1-3) in the conservation area situation.

EVALUATION:

<u>Good</u>	<u>Fair</u>	<u>Poor</u>	
	x		Impact
	x	x	Flexibility
	x		Encouragement of participation
	x		Provocation
	x	x	Relationship to visitor pace
x	x	x	Use by groups
x			Visitor safety
x	x		Links with surroundings
	x	x	Relationship to adjacent media
x			Minimum visitor effort
		x	Simplicity
x	x		Appearance
	x		Effect on resource
	x	x	Durability
	x	x	Resistance to vandalism
	x		Reliability
		x	Cost
		x	Expendability

Sound Guides for Vehicles (3.1.3)

DEFINITION: Devices designed for use by motorists in their vehicles which provide a broadcast or recorded message, or interpretive commentary about a route or area.

REMARKS: Potentially the most valuable application of the sound broadcast media to site-related interpretation in the Western Australian context. The idea of a "motorised nature trail", employing vehicle sound guides, has been used with mixed success in Europe and North America. Its proponents have sought to take advantage of the sedentary inclinations of the majority of tourists and the ability of the car to cover long distances and therefore a wider variety of climate and vegetation zones, at a macro-scale, than would be possible on foot.

The widespread use of tape-stereo equipment in private cars in recent years has been the main factor in turning the "vehicle sound guide" from a good idea to a practical reality.

It is best used in combination with maps and printed booklet guides in "kit" form which can bring together sources of entertainment, interpretation and promotion of local facilities for the travelling family.

In combination with one or two nature reserve pedestrian nature trails the vehicle sound guide is a most valuable participatory interpretation device.

EXAMPLES: None current.

EVALUATION:

<u>Good</u>	<u>Fair</u>	<u>Poor</u>	
x			Impact
x	x		Flexibility
x			Encouragement of participation
	x		Provocation
	x		Relationship to visitor pace
x	x		Use by groups
x	x		Visitor safety
x			Links with surroundings
x			Relationship to adjacent media
x			Minimum visitor effort
	x	x	Simplicity
x			Appearance
x			Effect on resource
	x	x	Durability
			Resistance to vandalism
x	x		Reliability
x	x		Cost
x			Expendability

Film Strips (3.2.1)

DEFINITION: The projection of static images under manual control by means of photographic film strips accompanied or not by a cued, tape-recorded commentary.

REMARKS: This is the simplest of the audio-visual media and the one most likely to find successful application in a Departmental interpre-

tation program. Its greatest value is in schools and in situations where the education authority actively maintains a film strip library. Even in this, their simplest form, however, the audio-visual media require specialised skills in photography, script-writing and integral production of both.

EXAMPLES: Widely used in schools.

EVALUATION:

<u>Good</u>	<u>Fair</u>	<u>Poor</u>	
	x		Impact
		x	Flexibility
			Encouragement of participation
	x		Provocation
x			Relationship to visitor pace
x			Use by groups
x			Visitor safety
	x		Links with surroundings
	x		Relationship to adjacent media
x			Minimum visitor effort
	x	x	Simplicity
			Appearance
			Effect on resource
			Durability
			Resistance to vandalism
	x		Reliability
	x	x	Cost
		x	Expendability

Audio-visual Slide Presentations (3.2.2)

DEFINITION: The projection of static images by means of photographic film transparencies accompanied by a recorded audio commentary.

REMARKS: The audio-visual slide presentation is perhaps the most widely applied audio-visual medium in conservation area interpretation. Numerous refinements are easily achieved with modern equipment, including instant image change and dissolve which add considerably to the professionalism of a performance. Very sophisticated applications involve four or more projectors and multiple screen presentations which add a further dimension to the impact of the medium as well as, it must be admitted, to its potential to soak up resources and require very close, skilled technical supervision.

Audio-visual presentations are expensive and require skilled producers to do well. They should only be contemplated where skill and money are abundant, otherwise results are likely to be visibly and audibly second-rate.

EXAMPLES: None current in Western Australia except for Bert Wells' personal production. The time involved and number of images required indicates the potential for this and similar audio-visual media to absorb large amounts of money and production time.

EVALUATION:

<u>Good</u>	<u>Fair</u>	<u>Poor</u>	
	x		Impact
		x	Flexibility
			Encouragement of participation
	x		Provocation
x			Relationship to visitor pace
x			Use by groups
x			Visitor safety
	x		Links with surroundings
	x		Relationship to adjacent media
x			Minimum visitor effort
	x	x	Simplicity
			Appearance
			Effect on resource
			Durability
			Resistance to vandalism
	x	x	Reliability
		x	Cost
		x	Expendability

Cine Films and Videotape Presentations (3.2.3)

DEFINITION: The projection of moving images by cine film or videotape.

REMARKS: A specialised group of media requiring specialised skills and ability to meet high production costs. Unlike some other specialist media "amateur" standard productions would not be tolerated. The general public is nightly exposed to the very best of professional video productions and could not be expected to respect anything short of the established "norm". Almost certainly outside the resources of a small Department to justify except in co-operation with commercial film or television producers.

EXAMPLES: The ABC television series "Exploration North" written and narrated by the late Dr. Douglas Dorward of Monash University was a brilliant locally produced example of good nature interpretation. Of all the individual episodes in the series "Life in the Dark Forest" is among the best to view as an example if required.

EVALUATION:

<u>Good</u>	<u>Fair</u>	<u>Poor</u>	
x			Impact
x	x		Flexibility
		x	Encouragement of participation
x	x		Provocation
	x		Relationship to visitor pace
x			Use by groups
x			Visitor safety
			Links with surroundings
			Relationship to adjacent media
x			Minimum visitor effort
	x		Simplicity
x			Appearance
x			Effect on resource
	x		Durability
			Resistance to vandalism
	x		Reliability
		x	Cost
		x	Expendability

3. THE PROPOSED PROGRAM IN CONCEPT - ON-SITE INTERPRETATION

Returning briefly to objectives, a site-related interpretation program is aimed in three, complementary directions:

- To assist people to develop a keener awareness, understanding and therefore appreciation of wildlife and the natural world. To a nature reserve visitor this includes helping to make the visit a rich and enjoyable experience.
- To assist management. Specifically related to the use of nature reserves, interpretation is the means of encouraging visitors to be thoughtful, helping to reinforce the underlying truth that nature reserves are special places requiring special behaviour. As an operational management tool, interpretation can minimise human impact by guiding people away from fragile areas.

- To promote public understanding of the Department and its programs. Every management agency has a message to convey. Well-done interpretation favourably promotes the image of the agency which supplies it.

Insofar as distinctly on-site interpretation is concerned, non-supervised facilities such as nature trails and publications specifically for visitors are the kinds of media likely to be within the reach of your Department and which can be usefully applied on selected sites.

The application of interpretation on-site is likely to be governed by the second objective in most instances: as a management tool, applied through the management planning process, in reaction to existing or developing visitor use. The exception to this reactive application would be initiatives the Department may take to promote the study of flora and fauna in accordance with provisions of its governing legislation. The development of a network of nature reserves in the near-Perth area on which interpretation may be a significant aspect of management is an example which seeks to fulfil all three objectives stated. Again, these developments can be suggested and decided upon through the management planning process, as required. Separate provision for interpretive planning may not be necessary for on-site developments.

There is a need, however, for the Department to clarify its position with respect of public use, especially recreational use, of nature reserves in general. The prime purpose of such a step would be to rationalise the apparent inconsistencies of principle and realities evident on a number of sites (p. 39) and to minimise their recurrence as a result of *ad hoc* decision-making. With this in mind and to facilitate the orderly development of on-site interpretation, we recommend as follows:

RECOMMENDATION 4.7:

That guidelines for the public use of nature reserves be developed. These guidelines should include standards for construction of on-site facilities.

RECOMMENDATION 4.8:

That, in view of their interpretive potential in terms of the image they project of the management authority, all facilities for any kind of public use on nature reserves be regarded as facilities for interpretation.

RECOMMENDATION 4.9:

That, as a pre-requisite to installation of public facilities, specific provision be made for them in reserve management plans. This provision should include production of publications for on-site use.

RECOMMENDATION 4.10:

That provisions of recommendation 4.8 and 4.9, above, apply to facilities for public use of nature reserves which may be recommended or offered to the Department by Local Authorities, local tourist committees and other groups such as service clubs.

RECOMMENDATION 4.11:

That on-site interpretation be regarded as a peripheral part of a more generally applied site-related interpretation program; that it remain principally reactive and be maintained in the background except on specified nature reserves where the demand or potential is such that interpretation should be a primary management objective. Nature reserves where on-site interpretation may have a high profile include Two Peoples Bay and the nature reserves near Perth including those in nearby country Shires such as Toodyay, Northam and York.

RECOMMENDATION 4.12:

That the role of the management plan as the means of ensuring effective planning for on-site interpretation be spelt out in the documentation of the management planning process now in preparation.

4. THE PROPOSED PROGRAM IN CONCEPT - OFF-SITE INTERPRETATION

We believe it appropriate for your Department to continue to develop the main thrust of its site-related interpretation program away from the nature reserves themselves. We base this view on three considerations:

- Consistency with Departmental policy, inclination and resources available for management.
On-site interpretation tends to promote site use. This has implications for both policy and reserve management operations. It may be justified where the benefits are high or existing rates of use such that further, incidental promotion has little effect. The appropriate place to argue these cost:benefit relationships is within the management planning process. It would be difficult to apply them generally.
- Direct cost factors.
Installation and maintenance costs for on-site interpretive facilities can be high. In special cases, subject to management plan, such as at Thomsons Lake and Two Peoples Bay, the intensity of existing use or the direct benefit of the facilities may be considered to justify the expenditure. This may not be so generally.
- An off-site interpretation program can be effectively based on media within your Department's expertise and financial resources to develop.
The printed media, including items such as books, pamphlets, periodicals, posters and leaflets, are most effective as the foundation of an off-site interpretation program. The Department may wish to experiment with the electronic and audio-visual media but these are likely to be outside its reach financially, for any general application. Publications are cost-effective and the basic skills and administrative framework needed to begin to develop an integrated publications program are in place in the Department.

One further factor has influenced our view: A publications-based, off-site interpretation program is an ideal vehicle through which to actively expound the primary purposes of nature reserves and to link these with the need to minimise public use, and possibly even access. The potential to develop such a philosophy in the Western Australian nature reserve system stems firstly from the sheer size of the State and secondly from the neuministic fascination of its more inhospitable environments. The great nature reserves echo both these things. Forty-five per cent by

area of Australian conservation reserves are inside the Western Australian nature reserve system. The great Victoria Desert Nature Reserve is one-tenth of the size of the United Kingdom. The nature reserves of the Kimberley, Pilbara and the deserts harbour their own kinds of scenic grandeur quite the equal of the finest national parks in the world. They are a great wilderness and worthy of interpretation as such. And it is a corollary of the modern wilderness concept that the wilderness is remote, untouched and accessible only as a matter of great privilege.

Enshrined in evocative writing, captured in sensitive photography, the opportunity exists to advance the idea that the great nature reserves should be set apart, inaccessible but valuable enough for resources to be allocated for their management. People of the kind you wish and need to impress will respect the reserves, and your Department, the more for giving them these insights. Modern, suburban man needs a backdrop of wilderness. It is indeed "... a means of reassuring ourselves of our sanity as creatures, a part of the geography of hope."

A publication program developing themes of protection and stewardship of remote, northern and eastern reserves is easily extended to the south-west. Publications which emphasise the delicacy of natural systems and their beauty as part of a grand design for nature are as applicable to the south-west as they are to the north and east, and they will help promote the same respect. A book on the granite rock reserves of the wheatbelt, sensitively produced, evocative of the intricate complexity of the granite rock system, and a subject of pride to its owners, does not need to promote their use. It may even begin to help to curb some of the excesses of people such as trail-bike riders and moss-rock collectors. Such publications would certainly help broaden the perceptions of more discerning members of the public and so advance the cause of your Department where it can do most good.

We therefore further recommend, as follows:

RECOMMENDATION 4.13:

That the site-related (off-site) interpretation program continue to be primarily based on publications and other products, complete in themselves and which do not pre-suppose or necessarily encourage their audience to visit nature reserves.

RECOMMENDATION 4.14:

That consideration be given to applying interpretive products of this type in the active promotion of nature reserves as delicate, often remote and frequently inaccessible areas not generally available for use by the public.

5. INTEGRATION OF THE PROGRAM ELEMENTS AND PLANNING OFF-SITE INTERPRETATION

Treating on-site and off-site interpretation as separate sub-streams of activity to some extent should not extend to precluding development of an overall site-related interpretation program. The need also remains to provide for the planning of an off-site program to which a number of groups within the Department may wish to contribute. These two functions, integration of the site-related program and the planning of an off-site program, are a logical function of the Wildlife Interpretation Coordinating Committee as proposed [Recommendation 3.5].

The several elements of a site-related interpretation program can be brought together and integrated with existing activities in a number of ways, such as those illustrated in Fig. 4, which also demonstrates the potential for exploitation of the relationships between them.

The logical centrepiece of an overall nature reserve and wildlife interpretation program is the magazine S.W.A.N.S. shown in a tabloid format in Fig. 4 to emphasise the importance of its role as a source of news. From S.W.A.N.S. stems the whole field of general wildlife information and interpretation, shown as a "third dimension" in Fig. 4. S.W.A.N.S. is a primary medium for the promotion of management plans, publications for use on nature reserves (nature reserve guides, etc.), other publications for off-site use and an ideal means for promoting participation in, and canvassing the results of, participatory surveys and research.

The second network of relationships between the program elements shown in Fig. 4 is centred on the management planning process. Interpretive plans for nature reserves and groups of reserves may be either a separate set of documents or included in provisions of management plans. These

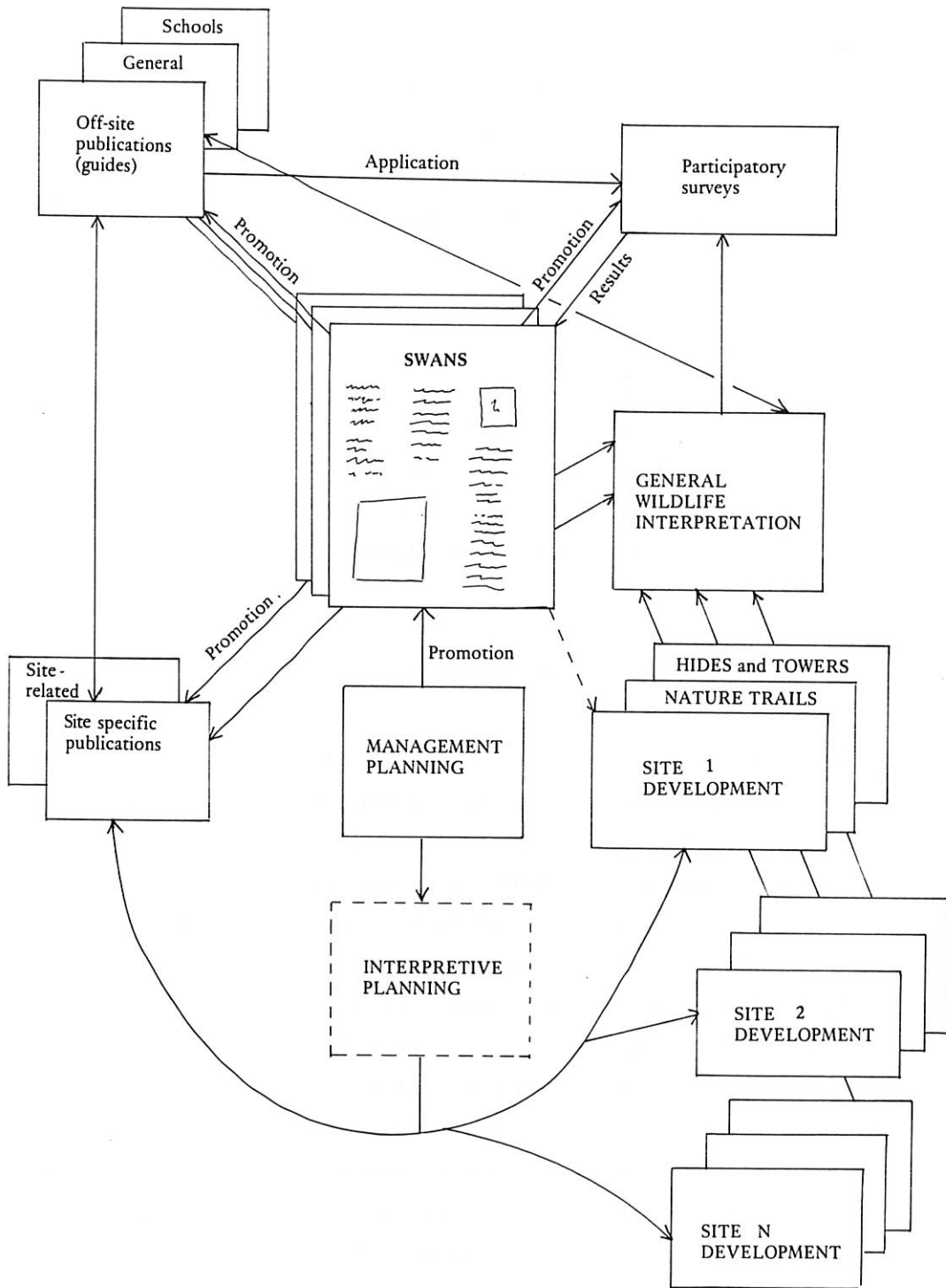


Fig.4 Relationships of elements of the proposed interpretation program.

specify on-site developments and a program for off-site interpretive productions which may include a whole spectrum of possibilities for published material and devices to promote the idea of nature reserves as a system of related and complementary sites.

RECOMMENDATION 4.15:

That, while there is great value in maintaining two parallel sub-streams of site-related interpretation activity, those for application on-site and off-site respectively, their coordination under the auspices of the Wildlife Interpretation Coordinating Committee be considered as a major function of that Committee.

RECOMMENDATION 4.16:

That the editorial policy, periodicity and format of the magazine S.W.A.N.S. be reviewed in relation to its potential role as the centrepiece in an integrated interpretation program, as a potential source of wildlife and nature reserve news and as a widely distributed source of information about other products of the program.

6. GIVING EFFECT TO THE OVERALL PROGRAM

Much of the administrative organisation needed to support the concept of an integrated wildlife/nature reserve interpretation program, such as we have envisaged, is already in place or would be effected by establishment of the proposed Wildlife Interpretation Coordinating Committee. The Department has the journalistic and sub-editing skills, management expertise and administrative support necessary to make such a program work. Its only deficiencies are some lack of experience in the deliberate application of its productions to interpretive purposes and the lack of an effective distribution system for publications.

Solution of the first ideally requires appointment of an experienced editor skilled in the interpretation field but can be remedied by the Department recognising its inexperience in the area and continuing to make use of outside support.

Solution of the second is simpler. It is clear that all productions of lasting value should be sold and the revenue used to further bolster the

program. There are two methods by which saleable productions of the types envisaged can be distributed:

1. By direct mail order
 - 1a. - Department administered
 - 1b. - Contracted.
2. Wholesale and retail distribution through commercial outlets.

The second alternative is the simpler but it has a number of disadvantages:

- Cost: Distributor mark-ups add to prices of products to an extent which may cause buyer resistance;
- Inflexibility: Alright for books and periodicals but may require maintenance of a separate distribution system for other products;
- Lack of personal contact: Once a product leaves the Department there is no ready means of assessing public interest or providing for feedback from the user.

Direct mail-order, on the other hand, is an especially effective form of marketing for specialist products - those with a readily defined, readily identifiable body of consumers. A number of conservation organisations, such as the Countryside Commission of the U.K., the British Nature Conservancy and the N.S.W. National Parks and Wildlife Service have applied direct mail-order as a major means of distributing their interpretive products.

We have assumed that your Department has insufficient resources to support a revenue-producing direct mail-order operation from within, which leaves the use of a contract mail-order system as the alternative to use of retail distribution outlets.

The advantages of direct mail-order compared with other marketing systems rest on its flexibility, cost, potential for cost-spreading, potential for maintenance of higher levels of Department control in the distribution process; and its potential for development of direct contact with interested people.

Direct mail-order marketing copes easily with any range of high value, low bulk products, from books to tape cassettes, slide sets and even decorated ornaments. It is suited, therefore, to distribution of most

of the likely products of wildlife/nature reserve interpretation programs. Bulky products, such as posters, can cause problems, but attention to format and packaging at the time of publication can obviate any difficulties.

The popularity of direct mail-order systems generally rests on their cost competitiveness with more usual, high overhead wholesaler-retailer distribution methods. Direct mail-order also facilitates presentation of products as part of a cohesive interpretation program; and the personal contacts generated in mail-order process can be used for purposes other than distribution of standardised products.

The disadvantages of direct mail-order systems rest with potential difficulties of generation and maintenance of distribution lists, but numerous techniques are available for their minimisation which have been applied successfully in similar situations.

RECOMMENDATION 4.17:

That interpretive products of lasting value be sold and that systems of direct mail-order employing an outside contractor be investigated as the means likely to prove most suitable to the distribution requirements of the program.

REFERENCES

- Aldridge, D. (1975). Guide to countryside interpretation. Part One: Principles of countryside interpretation and interpretive planning. HMSO, Edinburgh.
- Algar, D. (1976). The determination of appropriate media for effective interpretation. Technical Publication Parks Canada.
- Bell, C. and Sanders, N. (1980). A Time to Care. Chris Bell, Blackmans Bay, Tasmania.
- Burbidge, A.A. and Evans, T. (1976). The management of nature reserves in Western Australia. Report 23, Department of Fisheries and Wildlife, Perth.
- Carson, R. (1963). Silent Spring. Hamish Hamilton, London.
- Crook, I.G. and Burbidge, A.A. (1982). Lake Magenta Nature Reserve. *West. Aust. Nat. Reserve Manage. Plan No. 4*. Department of Fisheries and Wildlife, Perth.
- Crook, I.G. (1982). A signs standard for use in management of nature reserves in Western Australia. (unpublished)
- Crook, I.G. (1982). Nature Reserves of the Shire of Dandaragan, Volume 1. *West. Aust. Nat. Reserve Manage. Plan No. 5 (Draft)*. Department of Fisheries and Wildlife, Perth.
- Davey, A. (1982). Public participation in national park planning. A report to the N.S.W. National Parks and Wildlife Service. Applied Resource Management, Grafton.
- E.P.A. (1975). Conservation reserves in Western Australia, as recommended by the Environmental Protection Authority. E.P.A., Perth.
- Goldstein, W. (1979). Education in parks. In Goldstein, W. (Ed.) *Australia's 100 years of national parks*. Reprinted from *Parks and Wildlife 2: No. 3-4*.
- MacFarlane, J. (1975). Interpretive plan for the seven national parks of the Canadian cordillera. Parks Canada, Ottawa.
- McKenzie, N.L. (1973). Results of a biological survey of the Shire of Kent, W.A. Report No. 13, Department of Fisheries and Wildlife, Perth.
- Sagan, M. (1982). Thoughts on interpretive planning. *Parks 7(1): 24*.
- Putney, A.D. and Wagar, J.A. (1973). Objectives and evaluation in interpretive planning. *The Journal of Environmental Education 5(1): 43*.

- Tilden, F. (1957). Interpreting our heritage. The University of North Carolina Press, Chapel Hill, North Carolina.
- Wagar, J.A. (1979). Achieving effectiveness in environmental interpretation. In Proceedings of the southern States recreation research applications workshop. U.S.D.A. Forest Service General Technical Report SE-9. U.S.D.A.
- Washburne, R.F. and Wagar, J.A. (1972). Evaluating visitor response to exhibit content. *Curator* 15(3): 248.
- Western Australian Wildlife Authority (1981). Annual Report. Department of Fisheries and Wildlife, Perth.