



AUSTRALIA NEW GUINEA FISHES ASSOCIATION

AGENDA

National Convention

1-3 October, 1988

held at
Aquarium Society of NSW Building
Cnr Machinery Avenue & Claret Street,
Royal Agricultural Society Showgrounds
Sydney, NSW, Australia

WELCOME!!

Please use this weekend to exchange information and make new friends and contacts. Use the pages at the back of this booklet to record their names and addresses.

Take notes and ask questions. This is a unique opportunity to increase your knowledge of our fish . . . use it.

Above all join in and enjoy yourself.

Special Thanks to:

Aquarium Society of NSW
Dick Smith's — Australian Geographic Magazine

Dr. Gerald R. Allen,
Senior Curator of Fishes,
Western Australian Museum.

TOPIC OF LECTURE:: A COLLECTING SURVEY OF THE RAMU AND GOGOL
RIVER SYSTEMS, PAPUA NEW GUINEA.

The Ramu River is one of the largest rivers in northern New Guinea, rising in the central mountain range and flowing some 750Km to the Bismarck Sea. A series of 27 collections were made at distances ranging between 40 and 680 Km upstream from the sea. Our collections included 49 species belonging to 25 families. The fauna is dominated by Melanotaeniid rainbowfishes and Gobioids (gudgeons and gobies). Nearly all the species are identical to those found in the nearby Sepik drainage. The richest areas for fish are found well downstream near the sea, with a gradual attenuation with increased elevation and increasing distance upstream.

The Gogol River, although much smaller than the Ramu and Sepik, has a relatively large fauna composed of 26 species. We made seven collections in this system. Among the most interesting finds were rare species of a pipefish *Microphis mento* and a freshwater snake eel. The most common rainbowfish in the Gogol was *Glossolepis ramuensis*, a species that was previously known on the basis of a single specimen from the Ramu system.

ABOUT Dr. GERALD. R. ALLEN

Born in 1942 at Los Angeles, California. His introduction to fishes came in the form of a five gallon aquarium with guppies, swordtails and mollies, a birthday gift at the age of seven. An all consuming interest in fishes eventually resulted in B.A. and Ph. D. degrees in marine zoology from the University of Hawaii. While attending university Dr. Allen learned to SCUBA dive and his early professional career was exclusively devoted to the study of coral reef fishes. He came to Australia in 1972 aboard a research ship and has been here ever since, first working at the Australian Museum and serving since 1974 as Curator of Fishes at the Western Australian Museum. Shortly after arriving in Perth he was invited to join an expedition to the Kimberley's, his first research experience with freshwater fishes. This was the beginning of a continuing interest in the freshwater fishes of Australia and New Guinea, particularly the systematics of rainbowfishes and platyid catfishes. Dr. Allen has published 12 books and three additional titles will soon be released. He is also the author of 85 technical articles on coral reef fishes, 40 articles dealing with freshwater fishes and 25 popular magazine articles, as well as papers on birds and crocodiles. Dr. Allen has described more than 200 new fish species including many freshwater fishes from the Australia-New Guinea region.

Dr. Allen resides in the scenic Perth suburb of Roleystone with his wife Connie and sons Tony and Mark. He lists competitive cycling as his number one hobby and is currently the W.A. Veteran road racing champion.

Mr. Neil Armstrong,
ANGFA Victoria.

TOPIC OF LECTURE:: THE FISHES OF SAHUL

This slide lecture of approximately 100 slides shows some of Australia's native fish and their habitats.

Neil has travelled extensively throughout Australia and his keen camera eye has captured many of the fish habitats. This fine collection of slides is complemented by Neil's portraits of fish in aquariums.

Mr. Chris Barlow, B.Sc., M.Sc.
Senior Scientist with the Fisheries Research Branch,
Queensland Department of Primary Industries.

TOPIC OF LECTURE:: "THE APPARENT EXTINCTION OF THE LAKE
EACHAM RAINBOWFISH IN THE WILD, ITS
PRESERVATION IN CAPTIVITY AND IMPLICATIONS
FOR FISH TRANSLOCATION PROGRAMMES"

The Lake Eacham rainbowfish *Melanotaenia eachamensis* is known only from Lake Eacham, a small crater lake set in a closed catchment on the Atherton Tableland, north Queensland. Prior to 1984 it was extremely abundant, but by 1987 it could no longer be found in the lake. Its disappearance occurred at the same time as the development of self-maintaining populations of four species of native fishes, which were not indigenous and which presumably were stocked into the lake. Temporal and trophic evidence implicated the loss of the Lake Eacham rainbowfish with the introduced fishes.

The demise of *Melanotaenia eachamensis* represents the first (probable) extinction in the wild of a native Australian fish and it indicates possible ecological consequences inherent in translocating fishes outside their natural ranges.

Aquarium stocks of *Melanotaenia eachamensis* have been supplied by ANGFA members to the Walkamin Research Station, and they now form a reproducing population in a quarantined pond. The possibility of re-establishing the Lake Eacham rainbowfish in its native habitat is discussed.

Dr. George Blasiola II,
Director of Research,
The Wardley Corporation,

TOPIC OF LECTURE:: THE ROLE OF NUTRITION IN PREVENTING
DISEASES OF AQUARIUM FISHES.

Maintaining good fish health depends directly on the quantity and quality of nutrients received through the daily diet. Although nutritionally related diseases are uncommon, fish maintained in captive situations are prone to nutritionally related diseases. The requirement for certain nutrients is particularly crucial during times of stress including during disease and recovery. In order to insure normal growth, good structural tissue and organ integrity and function, normal reproduction and physiological functioning and resistance to infection, fish must receive nutritionally balanced diets.

Infections both non-infectious and infectious place high demands on a fish's physiology. Increased stress caused by an infection affects the normal metabolism of various nutrients. The deprivation of essential nutrients directly affect the ability of the non-specific and specific (immune system) defense mechanisms to protect diseased fish against disease agents.

The lecture will review the nutritional requirements of fishes, new developments in fish nutrition, and the role of nutrition in preventing disease and keeping fish healthy. The lecture will also cover specific examples of nutritionally induced non-infectious diseases in freshwater and marine requirements.

ABOUT GEORGE BLASIOLA

George Blasiola, Pathobiologist is the Director of Research and Development for the Wardley Corporation, in Secaucus New Jersey, U.S.A.. He received his B.S. in biology from the University of Miami, Coral Gables, Florida, and his masters degree in marine biology from San Fransisco State University.

Blasiola was formerly associated with the California Academy of Sciences, Steinhart Aquarium from 1973-1979 as an aquatic biologist, coordinating the Water Analysis and Pathology Laboratory. From 1980-1987 he was research biologist and the AquaVet Division Manager for Novalek Inc.

His articles on fish biology, fish health and disease control have appeared in journals and magazines in the U.S. and Europe.

Blasiola is a member of the American Fisheries Society: International Association of Aquatic Animal Medicine and the World Aquaculture Society. He was also associated with California State University at Hayward as an adjunct professor of zoology and past president of the Professional Association of Pet Industries Inc., a non-profit educational association. he was the project director for the pet industry Fact Finding Mission to the Philippines in 1986 to investigate the cyanide controversy.

Mr. Heiko Bleher,
Explorer,
West Germany

- Topic 1: My World: The Freshwater Fish
50-minute slide show
Topic 2: Irian Jaya expedition
60-minute video/film show

Resume on the lectures:

1. A review of adventurous collecting of freshwater fishes around the globe for the past 3 decades in 5 continents. During this slide presentation I will focus on the reason for the disappearance of quite a few species. Namely, species which can not be found any more in the wilderness. It will show the destruction of nature by mankind, past and present. Documentation and information in changes of weather/environment, the jungles of the past and today. I will present slides of fishes which have not yet been described scientifically and others which I have caught alive for the first time, species only known from dead specimen.

Another aspect in this lecture will be the life span of the survival of different freshwater fishes. A documentary proof of the survival under unbelievable natural conditions (i.e. Assam, Mato Grosso and Ivory Coast), raising the question "why they don't survive in captivity under similar conditions."

Fish behaviour is a subject I will mention, and speculation (Cichlids and Catfishes). Study of fishes underwater by day and by night, talks about personal experience. Ending with a prospect on the future of our beloved hobby, and photos of the mean fishes. The only species which should not be permitted to be imported or exported from or into any country,.

2. In 1983, Dr. G. Allen and cameraman Dr. Wolfgang Tins accompanied me on a unique expedition into the most impenetrable jungles in the world, West Irian Jaya, the Indonesian part of New Guinea.

My aim was to collect for the first time alive the unseen *Melanotaenia boesemani* described by Dr. G. Allan and Cross 1980. Probably today most colourful freshwater fish.

This adventure will take us to Jayapura, the highlands over Enarotali and the Vogelkop Peninsula. A 14-day odyssey flying over endless jungles in a small 172 Cessna with fuel in the back, but no place to land, to refuel...

Encounters with the Dani tribe, people of the past. Collecting numerous new species of fishes and aquatic plants under worst thinkable conditions. Walking for days under unbearable heat carrying 80 pounds of fish bags each... fighting the native tribes and Indonesian people to survive and reach back to civilization after all, with the jewel "in hands", the "Coral Rainbow". Probably never on any expedition have two people found so many new species of fishes in such a short time, in such a short time, in the 20th century.

Ron Bowman,
ANGFA Victoria.

TOPIC OF LECTURE:: A REPORT ON SPECIES MAINTENANCE AND EGG
DISTRIBUTION.

Ron Bowman has been a compulsive breeder of tropical fishes since 1955 and his private collection is housed in more than 100 aquariums in 3 fish rooms. Here he has bred and raised more than 220 species. Forty of these species have been indigenous to 'Sahul'.

He is presently maintaining 40 Australian and New Guinea fish populations in separate aquariums and has achieved several generations from very narrow gene pools. The species which Ron are maintaining and will discuss are as follows.

Melanotaenia affinis (pagwi pop.)

boesemani
eachamensis
exquisita
fluviatilis (Burnett River Pop.)
gracilis
herbertaxelrodi
lacustris
maccullochi (Etty Bay, Cairns)
maccullochi (Jardine River)
monticola
nigrans
oktediensis
papuae
parkinsoni
* sexlineata
sp. (Burdekin River)
sp. (Utchee Creek)
splendida australis (Beverley springs)
inornata
rubrostriata
splendida
trifasciata (Coen, Goyder, and Pascoe Rivers)

Chilatherina axelrodi
bulolo
campsi
fasciata (Clearwater Ck)

Glossolepis incisus
maculosus
multisquamatus
wanamensis

Cairnsichthys rhombosomoides
Iriatherina wernerii (Jardine River)
Pseudomugil signifer (Hervey creek, Myora springs, Ross River)
gertrudae (Etty Bay, Jardine River)
mellis
Chlamydogobius eremius
Pseudomugil popondetta furcata +
Tateurndina ocellicauda

Mr. David Burnett,
Managing Director of DUPLA Australia,

Background. Aquarist, freshwater/marine SCUBA diver, photographer, qualifications in the electronics and telecommunications industry.

TOPIC OF LECTURE:: MODERN TECHNOLOGY IN AQUARIUM MANAGEMENT.

DUPLA Aquaristik GmbH. was formed in 1978 by Horst E. Kipper. With research and manufacturing facilities located in Bielefeld - West Germany, this company has since its inception, been at the forefront of modern aquaristic technology. It was the many problems associated with the maintenance of an aquarium biotope, that prompted Horst Kipper and Kaspar Horst to devote themselves to research and the ensuing development of aquarium management systems based upon a sound scientific approach.

With the establishment of DUPLA Aquaristik GmbH, some highly controversial philosophies and practices were introduced which severely challenged the old school of thought. In Germany, and now rapidly throughout Europe, these once controversial ideas, have led to a revolution in modern aquaristic practice and a totally new way of thinking. EDTA, CO₂ fertilisation, and substrate heating, are some of the developments that have been introduced. The results achieved, have paved the way to a ready acceptance ranging from research institution to hobbyist.

With DUPLA's recent push into the export market, history is repeating itself. Here in Australia, amid similar controversy, the DUPLA philosophy is starting to shake the foundations of some long established beliefs. Horst Kipper has chosen Cairns as the location for a new facility for ongoing research and education on an international level. Developments such as this can only mean a very bright and interesting future for aquaristic science.

The seven main DUPLA systems will be introduced along with the background research that led to the development of each component, thereby explaining the philosophy and function of the entire DUPLA aquarium management program: TEMPERATURE CONTROL - LIGHTING - CO₂ FERTILISATION & PH CONTROL - SUBSTRATE AND WATER FERTILISATION - WATER TREATMENT - ANALYSIS - FEEDING. will all be covered. At the end of the presentation, an overview of future developments will be given, followed by a question/discussion time.

* *Melanotaenia sexlineatus* and

+ *Pseudomugil popondetta connieae* are lost or threatened.

P.L. Cadwallader B.A.(Oxon), Ph.D.
Fisheries Division,
Department of Conservation, Forests and Lands, Victoria

TOPIC OF LECTURE:: THE REDEVELOPMENT PROGRAM AND THE NEW
VISITOR/ EDUCATION CENTRE AT SNOBS CREEK

The Victorian State Government is presently undertaking a major redevelopment program at its Snobs Creek Freshwater Fisheries Research Station and Hatchery, situated in the Great Dividing Range some 140km north-east of Melbourne. The program, which began in 1982/83 and is scheduled for completion in 1988/89 is being undertaken in five stages.

*Stage 1 involved construction of native fish brood ponds and upgrading the water storage capacity of the hatchery to incorporate a rapid flow through system for salmonids and a relatively static system (from which water is drawn off the surface) for native fish.

*Stage 2 involved the construction of a native fish research and production facility.

*In Stage 3, the existing salmonid hatching house facilities were extended, new salmonid brood ponds and rearing units (raceways) were constructed and the settlement ponds (through which water passes before returning to Snobs Creek) enlarged.

*Stage 4 involved upgrading the laboratory/administration complex, particularly to upgrade the fish health laboratory facilities.

*Stage 5, which is presently under way, involves the construction of on-growing ponds for native fish and general landscaping and road re-surfacing works. A separate project funded from the Bicentennial Authority involves the construction of a visitor/education centre scheduled for opening in November, 1988.

The facilities will enable the Department of Conservation, Forests and Lands to produce more efficiently brown trout, rainbow trout and chinook salmon for stocking appropriate waters to provide recreational angling, and will also enable the Department to develop techniques for the intensive culture of native species such as Murray Cod, Macquarie perch and the endangered Trout cod.

ABOUT Dr. PHIL CADWALLADER.

Born in Birkenhead, England in 1947, was awarded a B.A. in (zoology) at the university of Oxford in 1969. He received his Ph. D. from the university of Canterbury New Zealand for his work on the ecology of freshwater fish in 1973. In 1974, he became a lecturer for the Zoology Department of the University of Auckland, and, also in that year became a research officer for the Fisheries and Wildlife Division, Ministry of Conservation, Victoria. His studies as a scientist for the Fisheries Division led to his appointment as the Manager, Fish Culture Section, Fisheries Division. Presently overseeing a major redevelopment of the Snobs Creek facility. Also Chairman of the Snobs Creek Visitors Centre Committee of Management, which is responsible for the management of the Snobs Creek Visitors Centre.

Alex Caughey,
Snobs Creek Visitors Centre,
Victoria.

TOPIC OF LECTURE:: HOW MANY FISH CAN YOU SQUEEZE INTO A TANK?

The title of this lecture takes the form of an often asked question. Unfortunately the answer is not easy.

Fishkeepers have often tried to give simple "rule of thumb" answers to the askers of this question hoping that the asker would stay in the hobby long enough to find the answer through trial and error.

The truth is that this simple question has no simple answer. This lecture addresses the question of fish population densities and presents information which could form the basis for quantifying fish densities and expressing them as biomass ratios.

Rick Datodi,
Managing Director,
Pet and Aquarium Industries Pty Ltd.,
Preston Victoria.

TOPIC OF LECTURE:: FISH HEALTH AND THE AQUATIC ENVIRONMENT.

Fish feed, breathe, grow, reproduce and excrete in their own environment; the water surrounding them. To maintain fish in a healthy state, and to encourage growth and reproduction, water quality must be kept within certain acceptable parameters. These parameters often vary for different species but some generalisations can be made.

The aquarist cannot hope to take proper care of his fish without an understanding of factors which affect the aquatic environment and at least a rudimentary knowledge of the physiological needs of his fish.

The talk will cover:-

- * The relationship between stress and disease.
- * A brief look at the immune system of fish.
- * The effects of changing water quality during transportation.
- * Water quality- temperature, oxygen, supersaturation, ammonia, nitrite and nitrate, chlorine and chloramines, growth suppressing factors.

Member of the Australian Society of Fish Biology (President 1985-87), Australian Institute of Biology, Australian Society for Limnology, Freshwater Aquaculture Association of Australia, Native Fish Australia, Australia New Guinea Fishes Association. Has many publications to his name.

Dr. Walter Ivanstoff,
Senior Lecturer in Biology,
Macquarie University,
New South Wales.

TOPIC OF LECTURE:: HARDYHEADS OF AUSTRALIA AND NEW GUINEA AND
WHAT THEY CAN POSSIBLY TELL US ABOUT HOW
THEY GOT THERE.

A predominantly freshwater group of hardyheads which belong to the genus *Craterocephalus* have a wide distribution over the continent of Australia and Papua and New Guinea. They are of some interest both to a professional biologist and an aquarium breeder since some of the species are very colourful and relatively easy to keep in captivity. The knowledge of their distribution in the freshwaters of inland Australia and also in coastal lakes, estuaries and even off open coasts, gives us a clue as to how they got to various parts of the continent, when the geological development of the continent is tied to their present (and possibly past) distribution.

I have been studying the freshwater hardyheads for over 10 years. Many of the names have changed, quite a number of new species have been added to the list. In 1987, my student and I travelled around Australia, often in the trail of other enthusiasts like Ray Leggett, and we were lucky to collect all species of hardyheads. We have also managed to find a new species of hardyhead in the Gulf of Carpentaria and its description is presently in press. Photographs of the areas and fish should be of interest to anyone who is fascinated by some of the more remote areas of Australia.

Lionel Lambkin
Belmont North N.S.W.

TOPIC OF LECTURE:: THE AUSTRALIAN LUNGFISH

The Australian Lungfish *Ceratodus* is a unique animal worth serious study.

Lionel has studied the lungfish for many years, both in the wild and in captivity. He has also made a major study of its skeletal form and recently published a book on his findings.

A group of *Ceratodus* were seen spawning in the Burnett River at Eidsvold. One fresh egg and one egg with a partly developed embryo from a previous spawning, were collected at the spawning site. The talk will describe the spawning site, the way a camera was used to study the eggs and the one little fish hatched and its development and the behaviour of the little fish hatched at Eidsvold, and those bred at Belmont, near Newcastle, and the amphibious stage of *Ceratodus*. The talk will cover the metamorphosis of larval *Ceratodus* and the fate of the larval lung pouches and the problems associated with setting up ponds to breed *Ceratodus* in captivity.

Mr. Ray Leggett,
Freshwater Fisheries Consultant,
Senior A Class Judge,
Hobbyist and fish breeder for 35 years.

TOPIC OF LECTURE:: EXHIBITING AND JUDGING TO RETAIN HIGH
STANDARDS OF FISH.

One of the major problems faced by ANGFA members is the availability of wild stock, in particular, the species from North Western Australia and New Guinea. It is therefore imperative that we maintain the quality of the species as near as possible to the standard from nature.

This can be achieved with careful selection of breeding stocks, heavy culling if needed, maintaining the best possible water quality and feeding a variety of good quality foods.

Having done all the above however, it helps to have others with a knowledge of the species give critical advice. This is where exhibiting and judges, can be a tremendous help.

I would encourage ANGFA members to maintain one or two species and if the quality and standards are kept up, there will be no need to fear the loss to our hobby if through political or habitat destruction, the fish is no longer available from the wild.

ABOUT RAY LEGGETT.

Born in Brisbane, Ray Leggett has had a life-long interest in all aspects of natural history, with special emphasis on breeding and raising fishes. Being an active member of aquarist clubs and participating in lectures, exhibiting fishes and judging, he has become acknowledged as an authority in the aquarium field. In addition to commercial experience managing aquarium facilities in England, Ray has completed breeding studies on over 200 species of freshwater and marine fishes. He has initiated, or assisted with, a wide range of other research projects including: stream habitat studies, aquatic field surveys in the Kimberleys, and Queensland, field counts of birds, reptiles, spiders, aquatic insects and plants. Many of these research activities have been carried out under the auspices of the Queensland Museum which has benefited from the extensive material collected on field trips.

Lecturing on aspects of natural history and interests in travelling, camping and nature photography have also led to membership of such societies as : Australia New Guinea Fishes Association, the Queensland Naturalists' Club, the Society for growing Australian Plants, The Aquarium and Terrarium Society of Queensland. Publications have included numerous articles in Australian and British journals. Ray, with co-author John Merrick has released a new book titled "Australian Native Fishes for Aquariums". Ray is also a consultant to EXPO 88.

Dr. John R. Merrick,
Centre for Environmental and Urban Studies,
Macquarie University,
New South Wales.

TOPIC OF LECTURE:: FRESHWATER GRUNTERS OR PERCHES: CARE AND
MAINTENANCE IN CAPTIVITY.

The grunters (Family Teraponidae) form one of the largest groups (in numbers of species) in Australian freshwaters; teraponids are widespread throughout the continent and in New Guinea. Only a few species have been bred in captivity or are suitable for aquarium displays. Basic life history information about many species is scant, but there is no evidence that any teraponid is endangered.

Recommendations for care of 7 species (from 5 genera) considered to have most display potential are considered; species combinations and size ranges are suggested. Practical hints on maintaining some of the other larger, more common species are also provided; observations on housing, feeding and diseases are included.

The potential of species such as the coal grunter is briefly discussed; the need for more active promotion and education, in the aquarium trade about local species is emphasized.

ABOUT JOHN MERRICK

Appointed as tutor and then lecturer, John R. Merrick has worked for many years in the Schools of Biological Sciences at the University of Sydney and Macquarie University. He was awarded an M.Sc. and Ph.D. from the University of Sydney for studies on the Australian freshwater grunters. John has many years of research experience.

Research programmes since 1970 have involved extensive field work on streams, lakes and dams throughout Queensland, New South Wales, Victoria and the Northern Territory. Publications have included general articles and scientific papers on aquaculture, reproduction and taxonomy of the saratogas, galaxias, grunters, fork-tailed and eel-tail catfishes, gudgeons and gobies.

Anthony Shelley,
Curator,
Sydney Aquarium,
Darling Harbour, Sydney.

TOPIC OF LECTURE:: THE SYDNEY AQUARIUM

This lecture will include a series of slides showing the growth of the aquarium from it's initial inception, construction and finally to it's presentation as it is today.

Sydney Aquarium includes one of the finest collections of Australian Freshwater fish and is dedicated to presenting Australian Aquatic life to the world.

The two huge floating oceanariums together with the other exhibits is now recognised by the Guinness Book of Records as the largest in the world.

What is ANGFA?...

AUSTRALIAN NEW GUINEA FISHES ASSOCIATION

In November, 1982, a group of native fish hobbyists from several states in Australia met in Melbourne to discuss forming a group which was to become known as ANGFA. The principle aim of this group was to publish a quarterly journal - the main vehicle of communication - which would be of interest to serious aquarists and scientists alike.

Shortly afterwards their aims came to fruition with the first issue of "Fishes of Sahul" - a twelve page high quality publication containing black and white reproduction as well as colour photographs. Many issues followed which contained a great and varied selection of articles on many aspects of both Australian and New Guinea Native fish.

At a later stage, groups in several Australian states formed Regional Groups which met on a regular basis to further educate and promote the hobby of native fish keeping. Interest from overseas was keen; ANGFA now boasts members from many parts of the world. If you have an interest in the native fish of Australia and New Guinea we invite you to join our organisation by subscribing to our magazine "Fishes of Sahul". Australian residents are invited to join a Regional Group (details can be obtained by writing to Secretary). The cost is small - the benefits are many.

(Sahul - pronounced Sa-hule - refers to the Australian land mass up to about 10,000 years ago when land bridges existed between Australia, Tasmania and New Guinea.)

RECORD OF CONTACTS

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AGENDA

SATURDAY

8.30 - 9.00	Registration.
9.00 - 9.15	Opening & Welcome.
9.15 - 10.00	<u>Ray Leggett.</u>
10.00 - 10.20	Morning Tea.
10.20 - 11.05	<u>Chris Barlow.</u>
11.05 - 12.00	<u>Heiko Bleher.</u>
12.00 - 1.00	LUNCH.
1.00 - 2.00	<u>Dr. George Blasiola.</u>
2.00 - 3.00	<u>Rick Datodi.</u>
3.00 - 3.20	Afternoon Tea.
3.20 - 4.20	<u>Anthony Shelley.</u>
4.20 - 5.00	<u>Dr. John Merrick.</u>
5.00 - 7.00	Informal meal & discussions (Optional)
7.30 - 12.00	Annual ANGFA 50/50 & Donation Auction.

SUNDAY

9.00 - 9.10	Announcements etc.
9.10 - 10.10	<u>Lional Lambkin.</u>
10.10 - 10.30	Morning Tea.
10.30 - 11.30	<u>Dr. Gerald Allen.</u>
11.30 - 1.00	<u>Heiko Blaher.</u>
1.00 - 2.00	LUNCH.
2.00 - 2.45	<u>Alex Caughey.</u>
2.45 - 3.30	<u>Dr. Phil Cadwallader.</u>
3.30 - 3.50	Afternoon Tea.
3.50 - 4.30	<u>Ron Bowman.</u>
4.30 - 5.30	<u>David Burnett.</u>
5.30 - 6.30	Informal meal & discussions.
6.30 - ????	TO BE ANNOUNCED.

MONDAY

9.00 - 9.10	Announcements etc.
9.10 - 10.10	<u>Neil Armstrong.</u>
10.10 - 10.30	Morning Tea.
10.30 - 11.15	<u>Dr. Walter Ivanstoffs.</u>
11.15 - 12.00	<u>Dr. Doug Hoese.</u>
12.00 - 1.00	LUNCH.
1.00 - 2.30	<u>Heiko Bleher.</u>
2.30 - 3.30	<u>Dr. David Coates.</u>
3.30 - 3.50	Afternoon Tea.
3.50 - ????	General Meeting & Reports.