Penguin News

What is a Penguin Club?

a) A large knobbly piece of wood used for punishing naughty penguins.
b) A place where trendy penguins go to rave the night away.
c) A club for anyone, aged between 8 and 16, interested in the natural world.

The Penguin club meets at Penscynor on alternate Saturdays from 10.30am until 1pm. We are one of several **Watch** groups that meet in the Glamorgan Area. Watch, if you haven't heard of them before, is the junior branch of the Royal Society for Nature Conservation (R.S.N.C. The Wildlife Trusts Partnership). For details of membership look on the page eleven.

Running the Penguin Club would have driven me completely mad by now if it hadn't been for the support of my fellow Penguin leaders Bernie, Wendy and Wyn. Thank you for your support guys!

WATCH

Penguin events over the last year.

1990

Nov. Looking at Hibernation.
Dec. Blindfold nature walk & Zoo Tour.

1991

Jan. Building a Cardboard Rainforest - I.
Feb. Building a Cardboard Rainforest - II.
Mar. Woodland treasure trail with camoflage clues.
Apr. **Penguin Club goes bi-weekly.**
Pondipping in the Penscynor streams.
Pondippping at Kenfig Nature Reserve.
May Bugs, beetles and things that go buzzzz!
Ozone Project 1991 & making beetle masks.
June Checking beetle traps.
Beach combing at Oxwich Bay.
Identifying sea animals by making keys.
Great British Wildlife & Countryside Show.
July Federation of Zoos birthday Party.
Pondipping at the Aberdulais Basin.
Aug. Cardboard Dinosaur Building & Film making I.
Graveyard Survey at St. Catwg's church.
Sep. Junior Keepers.
Penguin Club Bar-B-Q.
Animal movement & behavior I.
Oct. Film making II.

By Gavin Tucker

Birds of Prey Quiz.

1 Which of these Birds of Prey are real?

Brown Kite : Red Kite : Green Kite : Black Kite

2 These are all kinds of Owls, or are they? Tick the ones you think are real.

Little : Barn : Tawny : Great Grey : Pink Spotted : Snowy

3 Name four kinds of Eagles. What kind of Eagle can you see at Penscynor?

4 Can you think of four Birds of Prey that arn't eagles? Name them.

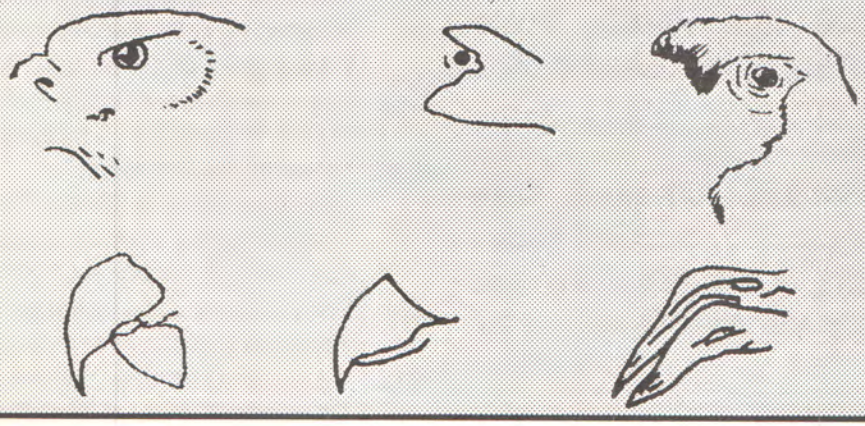
5 Name two kinds of Hawk.

6 Put these birds in order, starting with the rarest.

Buzzard : Merlin : Honey Buzzard

7 Name a Bird of Prey that lives wild in the hills above Penscynor?

8 Match the eagle to it's beak.



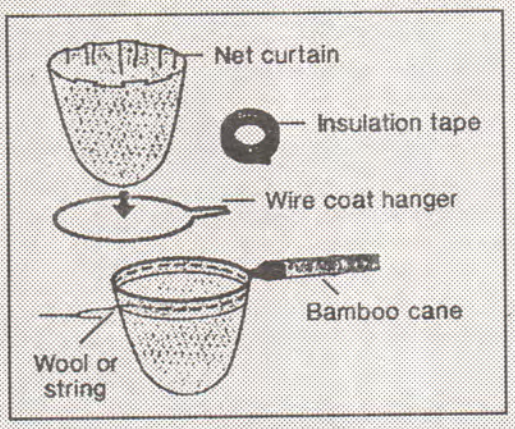
Answers: 1. Red Kite & Black Kite / 2. Well I've never heard of a Pink Spotted Owl! 3. Golden, Imperial, Steppe, Greater & Lesser Spotted, Wedge-Tailed and loads more! Penscynor's Eagle is an African Fish Eagle. / 4. Buzzards, Hawks, Kites, Vultures, Kestrals, etc. / 5. Sparrowhawk, Goshawk. / 6. Honey Buzzard, Buzzard, Merlin. 7. Buzzards mainly.

Pond Dipping.

We have been to look at three different "Ponds" over the last year. We started by having a rummage through the streams and ponds in the zoo. This was followed by a spring outing to Kenfig Nature Reserve (Many thanks to Steve Moon at Kenfig for loaning nets etc.). Our most recent dip was at the Aberdulais canal basin.

What you need:

Nets. These can be bought, begged, borrowed or made. We made ours out of garden canes, insulation tape, wire coat hangers and net curtain material (my net curtains to be exact!).



Plastic trays (photographic trays, ice cream tubs, or pale coloured washing up bowls) are necessary to examine the catch. Other invaluable aids are Wellies, notebooks and pencils, magnifying glasses and forceps or spoons (for handling animals).

We used a number of different sampling methods. In the fast flowing, shallow streams of Penscynor we took kick samples to discover what was hiding under the stones of the stream bed. In a Kick sample the net is held downstream of the observer and the water current is used to trap animals swept into the water as the stream bed is disturbed (by a few good kicks). We found loads of Freshwater shrimps, Water Fleas and Freshwater worms (*Erpodella testacea*) feeding on the leaves that had fallen into the streams. We also found Midge larvae, May Fly nymphs, a number of plant eating snails and some snail eating Leeches. Oh, and we also got really wet and muddy (essential to having a good time!)

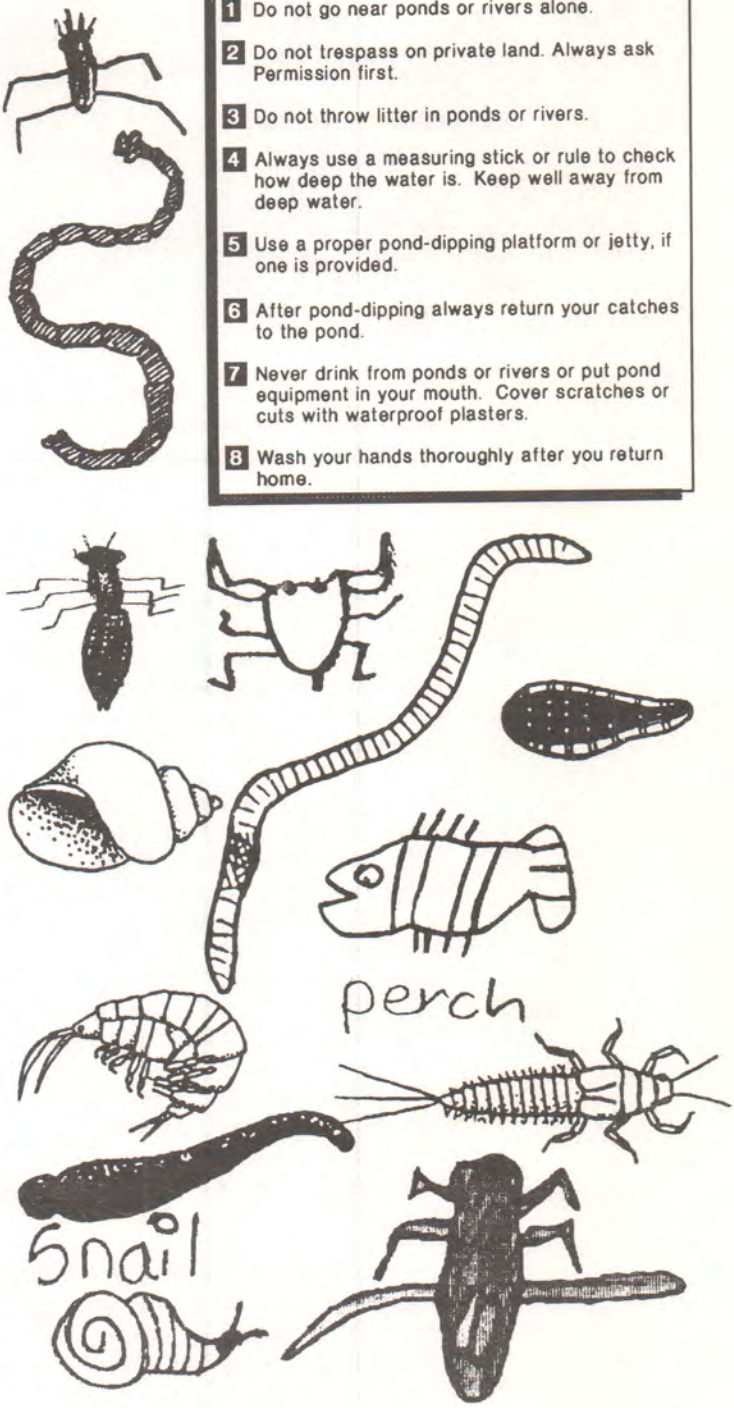
At Kenfig and Aberdulais we use our nets to sweep the water at various levels, examining the catches separately. We found a huge variety of animals including Insects (Small Water Beetle, Whirligig Beetle, Water Measurer, Water Scorpion, Pond Skater, Back-Swimming Water Boatman, the larvae of Caddis Flies, Gnats and Midges and the nymphs of May Flies, Dragon Flies and Stone Flies), Platyhelminths (flatworms), Annelids (freshwater worms and leeches), Crustaceans (Freshwater Shrimps, water slaters) and Molluscs (various snails).

To help identify the captive beasties in our trays we used identification keys from three main guides. The Pondwatch pack (published by Watch), The Collins Field Guide to Freshwater Life (published by Collins) and the Observers Book of Pond Life (published by Frederick Warne & Co. Ltd.). The Pondwatch pack was full of useful advice and tips for successful pondwatching, unfortunately the keys were a little inaccurate for the older members. The Collins guide was also full of useful tips and was by far the best for accurate identification of beasts. However it was far too complex for any of the Penguin club (including me) to use without a great deal of practise. By far the best guide in the field was the Observers Book as it was small and contained a clear pictorial key which all but the youngest members could use with ease.

Howie

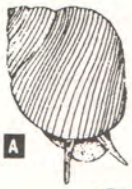
Pond code.

1. Do not go near ponds or rivers alone.
2. Do not trespass on private land. Always ask Permission first.
3. Do not throw litter in ponds or rivers.
4. Always use a measuring stick or rule to check how deep the water is. Keep well away from deep water.
5. Use a proper pond-dipping platform or jetty, if one is provided.
6. After pond-dipping always return your catches to the pond.
7. Never drink from ponds or rivers or put pond equipment in your mouth. Cover scratches or cuts with waterproof plasters.
8. Wash your hands thoroughly after you return home.



Oxwich Bay Seashore Adventure 15th June 1991

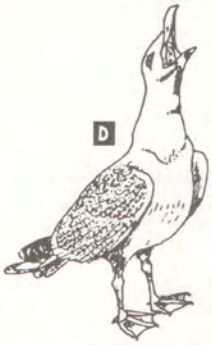
By Howie



Penscynor's local marine tank had been empty, save for some hardy little Beadlet anemones and a Blenny, since spring 1990 when two litres of Coca Cola concentrate had spilled into the water killing everything else.

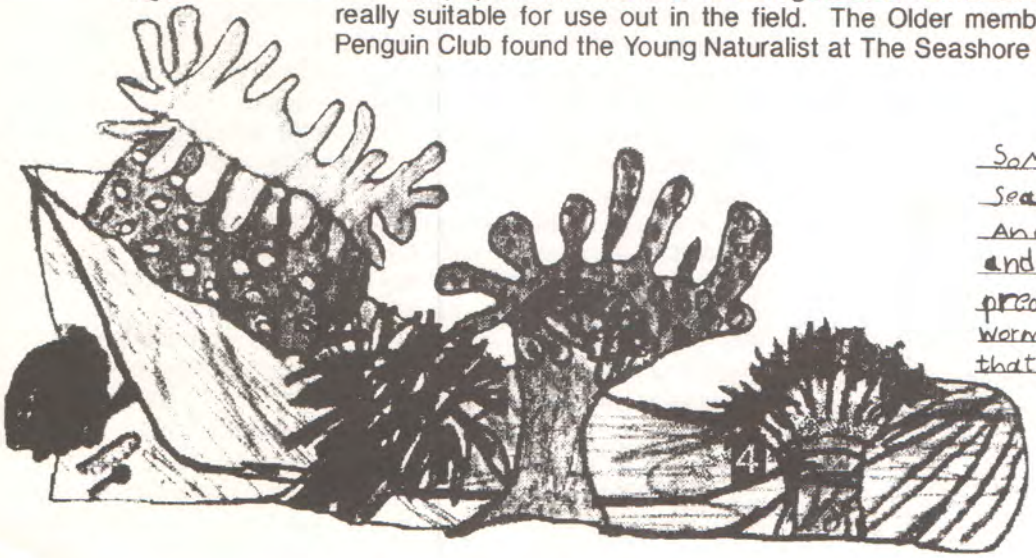
The tank needed to be restocked, redesigned and relabelled. The task of doing all this fell to the Penguin Club and 2nd Bishopston Brownies (who had adopted the tank). We planned a joint visit to the Gower coast in order to study the local seashore and collect some specimens. The date was carefully chosen to give the lowest Saturday tide possible. Oxwich Bay was chosen as a location because it is flat with a large intertidal zone. It is also easily accessible by car.

The day turned out to be without a doubt the wettest, coldest, and generally most miserable June 15th I have ever seen. However, in spite of the weather, everyone (Penguins and Brownies) threw themselves with energy into the various activities. We started of by searching through the strandline where we found loads of interesting seaweeds, cuttlefish shells, fish egg cases, litter etc. Next we dug about in the sand to look for burrowing worms. Finally we ventured out with the tide to see what had been left hiding under the seaweeds, the rocks and in the rockpools.



We re-used our pond-dipping equipment to help us probe the rock pools. The only extra equipment taken were plastic bags, and plastic pots to keep specimens in. Animals which we weren't planning to keep in the tank were carefully returned to the spot where they had been found.

Identification of beasties was greatly aided by using Exploration Seashore (published by the Marine Conservation Society). This is a superb book aimed at teachers/youth leaders. It contains loads of practical tips, along with teaching ideas, identification aids and clear line drawings throughout. The Usborne NatureTrail Book of Seashore Life was popular with most of the Penguin Club. Unfortunately it isn't really suitable for use out in the field. The Older members of the Penguin Club found the Young Naturalist at The Seashore (Published



Some colourful examples of Sea anemones. Anemones are not flowers of course and in fact they are greedy predators catching and eating fishes worms crabs and any other creatures that touch their waving arms.

by World International Publishing Ltd.) interesting. It was a good source of ideas, but hopeless for identifying beasties (definitely for the keener older members). The book I kept in my back pocket for all the difficult questions was the Hamlyn Guide to Seashores & Shallow Seas of Britain and Europe. Beautifully Illustrated throughout with clear descriptions of all the "common" organisms to be found it is a complete nightmare to use (with the exception of the pictorial key in the front). However, I never leave home without it! (Just to be flashy I spotted a mistake on page 91 - *Actinia equina* (strawberry form) was reclassified in 1984 as *Actinia fragacea* - so there!)

Can you name the animals on page 4?

Try to match the picture letters to the names below (answers on page 8).

1. Beadlet Anemone
2. Velvet Clawed Swimming Crab
3. Herring Gull
4. Common Blenny
5. Shore Crab
6. Dahlia Anemone
7. Common Mussel
8. Edible Crab
9. Common Starfish
10. Common Barnacle
11. Whelk
12. Snakelock Anemone
13. Limpet
14. common Prawn

Do It Yourself Sealife Wordsquare

First you must find the Seashore Animals and plants hidden in the section I have done. When you've done that think of some animal or plant names to hide in the unfinished part. Try to make the finished Wordsquare as difficult as you can by looking names up in books.

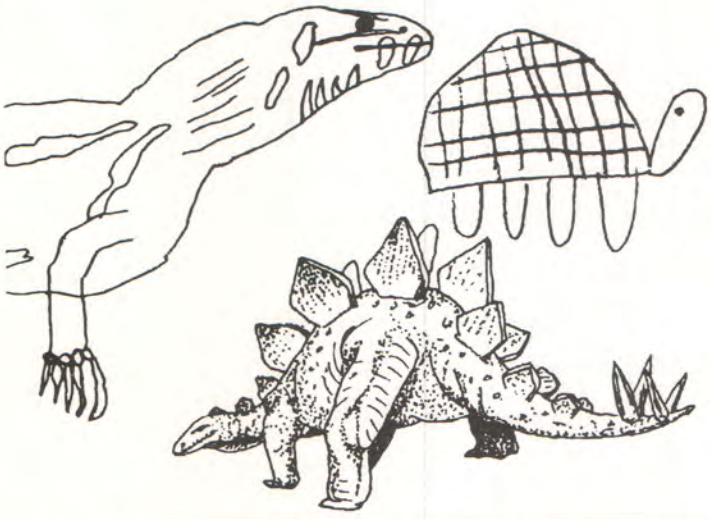
Reptiles

Reptiles first appeared on the earth about 270 million years ago. Their tough, scaly, waterproof skins and their hard shelled, waterproof eggs made them the first back-boned animals to really conquer the land.

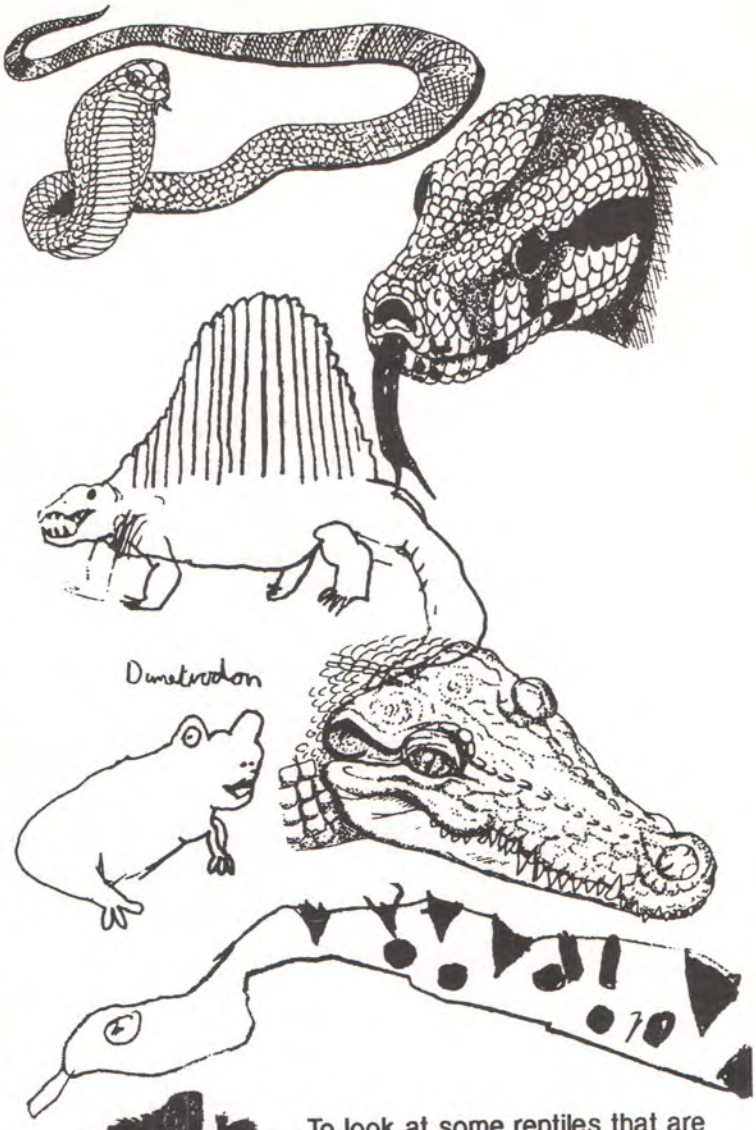
Reptiles are cold blooded (ectothermic) which means that they are unable to make their own body heat in the way that mammals (like us) and birds do. This means that reptiles can't cope very well with cold weather and explains why there are only six species of reptile in Britain (What are they? Answers at the bottom of the page.).

Being cold blooded has both plus and minus points. On the plus side it means that reptiles don't need to use up 3/4 of their food to keep warm like we do; meaning they can live happily while eating a lot less (I once read that a rattle-snake can live on one fat lizard a month). On the minus side, reptiles can't move fast to catch their food or avoid predators unless they warm up first by basking in the sun on hot rocks.

Reptiles were at their most successful between 240 and 65 million years ago. This was the age of the Dinosaurs (among other things). Dinosaur in English means "terrible lizard" which is a bit unfair really as not all the Dinosaurs were giant, mean, flesh-eating monsters. In fact, some of the largest dinosaurs were harmless vegetarians and many others were very small indeed. One of the most amazing things about the Dinosaurs is that there aren't any alive today. About 65 million years the Dinosaurs vanished. Well they didn't actually vanish, but they all died out in quite a short time (which amounted to the same thing for the dinosaurs!). People have come up with lots of ideas to explain how this happened; perhaps the earth got too cold, perhaps they all died of flu, perhaps the earth was hit by a giant meteorite? No-one will ever really know for sure.



Everything you ever wanted to know about reptiles is in the Reptile Fact Pack, available from the Zoo Centre. Oh, before I forget British reptiles are:- Grass Snake, Adder (our only poisenous snake), Smooth snake, common lizard, sand lizard and slow worm. Six in all.

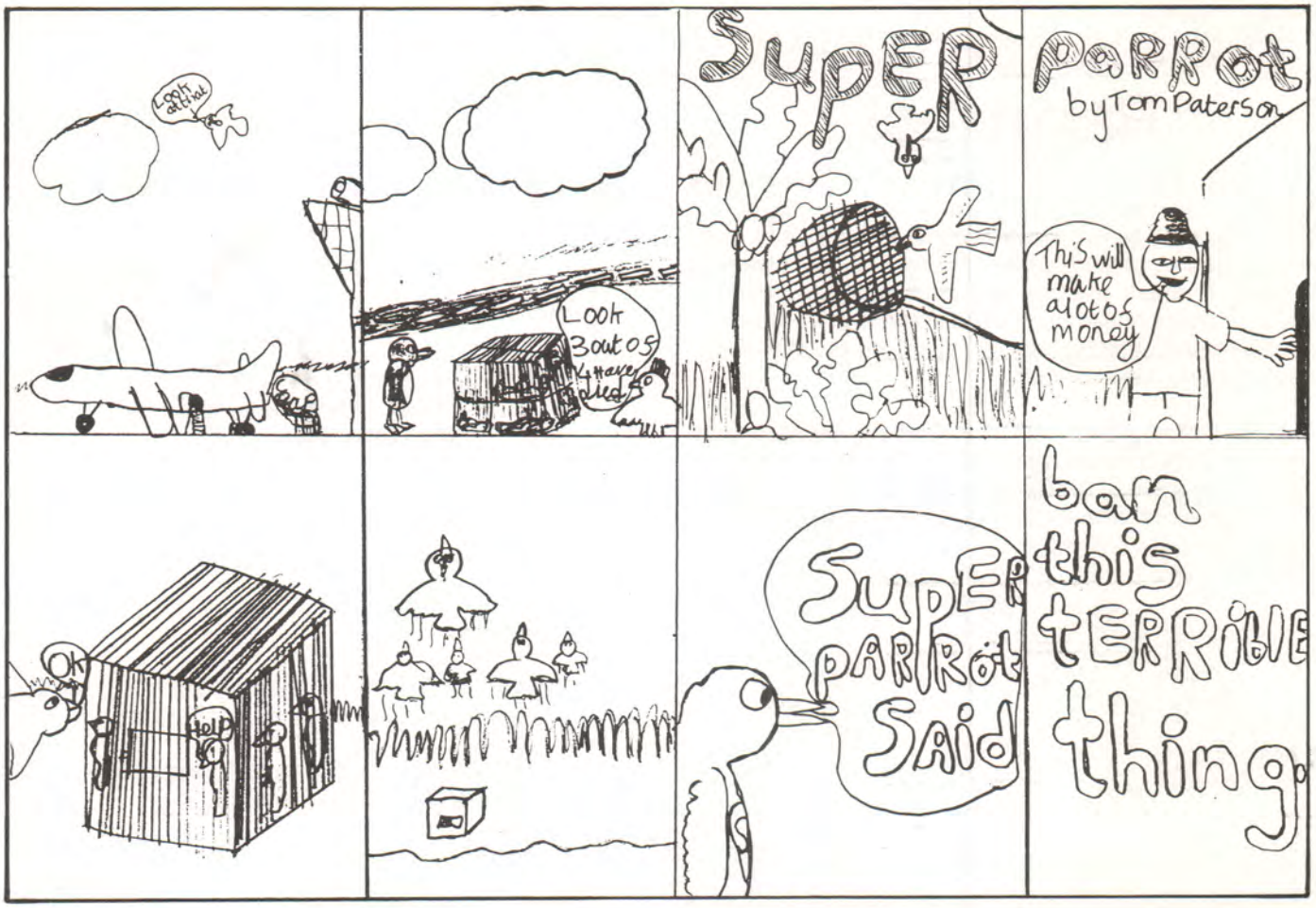


To look at some reptiles that are still alive today the Penguin club went to the Gower Reptile Centre at Middleton, Gower. We stayed there all morning while Noel, the owner, showed us round and let us hold a number of snakes and lizards - including a massive Burmese python that looked big enough to eat some of the smaller members!

The animal I found most interesting was the bluff adder, which uses it's special hidden fangs to **make holes in frogs.** Making holes in frogs might sound an odd way to catch your dinner but it makes good sense because many types of frog try to escape being eaten by puffing themselves up with air which makes them too big to swallow. By making a hole in the frog the snake makes the air escape, so it can swallow the frog. Clever Eh? We also saw Eddie, Penscynor's iguana (on loan to the centre).

Everyone had such a good time at the centre that we'll be visiting again in the spring to have another look around.

Howie.



Super Parrot stopped this shipment of rare parrots. Many others will not be so lucky.

Even though wild caught birds are sometimes needed for breeding purposes there is nothing to excuse the many deaths that occur every year in order to supply the pet trade.

Support the R.S.P.C.A. campaign to ban the trade. Leaflets available from the Zoo Centre.

BAN THE WILD BIRD TRADE

Different Senses

Apes (like us, chimps, gibbons etc) monkeys and prosimians (lemurs etc) are closely related enough to be group together into one big family; the Primates. All primates have very good eyesight to help them hunt for food and travel quickly/safely through high trees. The majority of mammals do not have such good vision and tend to make more use of their other senses: touch, taste, smell and hearing.

To see how well the Penguin club could "survive" in the wild if deprived of their eyesight for a little while I dragged them all off on a blindfold walk thought Graig Gwladys country park (at the back of the zoo).

First of all we tried walking with one leader (who could see) towing all the other members (who couldn't). However, the ground was too rough for this to work properly so we split into twos and took it in turns to be leader of the pair.

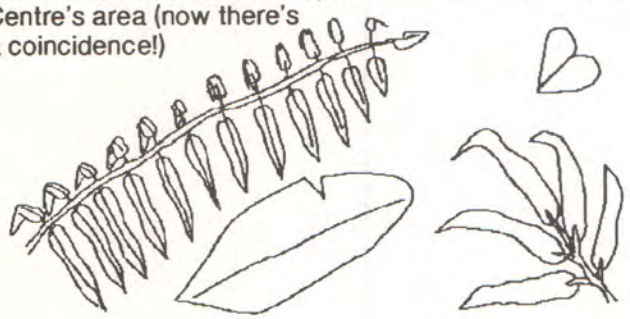
Apart from some early stumbling everybody coped very well and found it quite easy to pinpoint the location of streams and to feel the difference between roads, path, tracks and whether there were Larch needles or deciduous leaves underfoot. After trekking round the woods for a bit we headed round the zoo to try and identify the animals by sound and smell. Some, were easier than others.

Howie.

Building a cardboard Rain forest.

Rain forests cover a narrow band around the equator. Although they only cover around 7% of the earth's surface they provide a home for over 3/4 of all known species of animals and plants. The true potential of many of these animals and especially the plants is only now being realised. Unfortunately, many potentially valuable plants are becoming extinct before they have been properly investigated.

In January and February 1991 the Penguin Club helped to build a model rain forest in the Zoo Centre. We used waste paper, chicken wire and cardboard to make the model which now occupies exactly 7% of the Zoo Centre's area (now there's a coincidence!)



A leaflet showing how to make a cardboard rainforest like ours is available from Howie in the Zoo Centre.

Rainforests.

By Alex Murison.

More living things live in the rainforests than anywhere else on earth. Yet at the present rate of destruction there will be very little of it left in just 50 years time.

What you can do:

- Support wildlife conservation groups that have started projects to save the rainforests.
- Don't buy cheap beef products, especially if they come from the rainforests.
- Don't buy tropical hardwood products [Beware of "From Sustainable Forest" claims, check for W.W.F. approval (Howie)].

Making a Mini Rainforest

You will need:

plasticine (brown and green), twigs, dead leaves, sandpaper, string, paints.

What to do:

Put your dead leaves on the sandpaper. Mould the brown plasticine into lots of little cone shapes. Stick the twigs (which represent the trees) into the tops of the cones and place them on the sandpaper. Stick some pieces of green plasticine onto the twigs to look like leaves. Cut the string into strips and dip into some green paint. When it is dry, weave it through the twigs to make the vines and creepers. Now you have your own mini rainforest.

Answers to Picture Questions

1. Beadlet Anemone	L.	8. Edible Crab	B.
2. Velvet Clawed Swimming Crab	J.	9. Common Starfish	K.
3. Herring Gull	D.	10. Common Barnacle	E.
4. Common Blenny	N.	11. Whelk	A.
5. Shore Crab	F.	12. Snakelock Anemone	H.
6. Dahlia Anemone	C.	13. Limpet	M.
7. Common Mussel	I.	14. common Prawn	G.

Colour Your Own Rainforest Scene

Can you find the lizards that Bernie has hidden in his drawing?

Coping with cold.

When it is cold we wrap up in sweaters and coats which trap warm air next to our skin. This insulates our hot bodies from the cold air outside and saves energy. It saves energy because any hot object (including us) gets cooler until it is the same temperature as the air around it (to test this out get a cup of hot tea/coffee and measure its temperature every minute to see what happens). Warm blooded mammals like us and birds usually replace the heat they lose by burning up food (three quarters of our food goes on keeping us warm). The more heat an animal can keep in, the less food energy it needs to use up keeping warm - saving energy for other things.

Some animals, such as deer, foxes and sheep (how many more can you think of?) do this by growing special winter coats thickening their fur. Birds trap warm air by fluffing out their feathers. Next time you are in the Zoo Centre watch what Elton the Cockatoo does when she is cold.

Many species of birds escape the winter by flying to warmer places where there is plenty of food. This is called migration. Some land mammals migrate to follow their food or water supply but it is not a very good way of escaping the winter. Fish also migrate between different seas to follow their food and escape the cold.

Insects have many different ways of surviving the winter. Some lay insulated eggs that can withstand the cold while the adult insect dies off. Others, such as butterflies and moths, overwinter as chrsysalids; emerging as adults in the spring.

Reptiles, some mammals (hedgehogs, dormice, bats etc.) some insects (butterflies, bees etc.) and one species of bird (the burrowing owl) survive the winter by hibernating. Hibernation is a deep sleep that can last weeks or even months. The sleeping animal survives by slowly using up fat which it stored during the summer when there was plenty of food about.

It is important for a hibernating animal to save energy and keep as warm as possible. Some do this by sheltering in burrows or caves while others make nests of straw, leaves etc. We wanted to know what sort of body covering/nest made the best insulator so we designed an experiment to try and find out.

Dormouse Experiment.

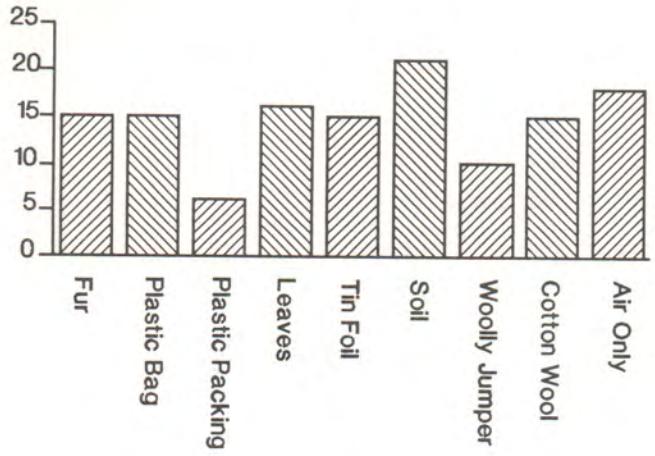
We couldn't use real animals in the experiment (for obvious reasons) so we did the next best thing and made some model dormice out of paper cups full of hot water. We hoped to find the best body covering/nest lining by seeing which dormouse stayed hottest longest. All the members chose their own covering and used the method in the box. Unfortunately, we only had time to leave the dormice to cool for fifteen minutes instead of thirty.

You will need:
elastic bands, paper cups or empty yoghurt pots, clingfilm, thermometer, hot water, various body coverings/nest linings (e.g.. fur, wood, foil, plastic, straw, leaves etc.).

Method:
Make the dormouse by 3/4 filling the cups with hot water of a known temperature. It is important to fill each cup with about the same amount. (See next experiment for the reason why.) Cover with clingfilm, secure with an elastic band and wrap in the desired body covering/nest lining. Remember to leave one dormouse out in the open for comparison (this is the control dormouse), leave for thirty minutes and measure the temperature of each dormouse.

Results:

Body Covering / Nest Lining	Temperature (°C.) Before.	After	Lost
(Michael) Fur	50	35	15
(Emma) Plastic Bag	50	35	15
(Gemma) Plastic Packing	40	34	6
(Tom) Leaves	50	34	16
(Natalie) Tin foil	50	35	15
(Gavin) Soil	50	29	21
(Jason) Woolly Jumper	40	30	10
(Becky) Cotton Wool	40	25	15
(Howie) Air Only	50	32	18



From the table and the chart you can see that the best insulators are those which trap warm air around the dormouse best. The plastic packing was the best as it had a layer of air trapped inside it. Soil was not a very good insulator in our experiment. This was probably because we packed it tightly around the dormouse. Instead of trapping air around the dormouse it helped cool it faster. We didn't find much difference between the different coverings. Perhaps if we had left the dormice in their nests longer we would have seen clearer results.

Big and Small.

The majority of animals that hibernate are small. Is it easier to stay warm and active if you are bigger? We tried another experiment to find out.

You will need:
the same as in the dormouse experiment except; use 1 small yoghurt pot - dormouse, 1 large yoghurt pot - badger, 1 bucket (plastic) - bear

Make animals same way as before. Record the temperatures and leave for 30 minutes.

You can see from the table that the larger the animal, the less heat it loses. This is because large animals, such as bears, have a small skin or surface area compared to their volume (all the stuff inside). Small animals, on the other hand, have a large surface area compared to quite a small volume. Heat is lost across the surface area, and not the volume, so the more volume an animal has compared to its surface area the easier it can keep warm.

Results:

Size of Animal		Temperature (°C.) Before.	After	Lost
(Gemma)	Small Animal.	45	28	17
(Emma)		45	29	18
(Becky)		45	28	17
(Tom)	Big Animal.	45	33	12
(Michael)		45	34	11
(Natalie)		45	33	12
(Howie)	V. Big Animal.	45	40	05

WATCH

WATCH membership is open to anyone aged between 8 and 18 with an interest in the environment. Membership costs £5 per year (family membership costs £8), for which you will receive:

the club magazine WATCHWORD (3 times a year). Each issue includes a full colour poster, details of projects, news and features on current environmental issues.

a local newsletter giving details of all the activities in your area.

details of the WATCH club Gold Award Scheme which is run exclusively for members.

information about WATCH holidays and other services to members

Penguin Club membership costs £3.50 per year and is open to all. Members are allowed free entry to Penscynor on club days and allowed to take part in Penguin club activities. They also receive the Penguin News.

For further details contact : Howie Watkins (Education Officer)
Penscynor Wildlife Park, Cilfrew, Neath, West Glamorgan. SA10 8LF
Tel. (0639) 642189

The Back Page.

Hello my name is GEMMA
I have been coming to the penguin club for over two years during that time member ship has increased from about 6 to over 20.
We meet every other saturday in the Education center At penscynor Wildlife park.
We do lot's of exciting things.
most recenty we have been pond — dipping At Kenfig nature reserve And Aberdulais canal basin. At Aberdulais we had a boat race with a difference we each had to pick a differcencet leaf drop it over a bridge and see who was first. my leaf came 4th its called Japanese knot-weed.

Name Gavin Tucker.

Age 10.

I Joined Because I like wildlife and I Thought it would be a chance to make some new friends as well.

I like Penguin club Because we learn about wildlife and conservation in a fun way.

About penquin club

I Joined penquin club in June and I really lookforward to our meetings every other saturday. I like Howie he's very funny and good fun to be with. Wendy is very nice, she helps me with my painting and is helpful with every one in pequin club. I like the Rabbits and pequins the best, I have two rabbits and five ~~baby~~ babys to look affter at home. I like to feed the penguins its fun. but I dont like it when howie tries to throw me in, he teases me a lot but I dont mind. I like going on walks with howie to the ponds and churchard to look for diffrent plants, and insects

by claire sheldon

The penguin club News Letter

Howie is our Leader. In One penguin meeting we Went for a visit to Aberdulias baisn we Went pond dipping. we caught Waterscorpion, pond skaters, a newt tadpole, pond Slater, perch and Water snails. We went on a leaf race aston and found the stingy nettle Was the Winner. We Went to the hut and looked at all the animals we held the Royal Python. Then We all Went home.

Age 8

My name is Ryan Morgan.
and I live at Cwmbach Cottages
Cadoxton.

I Joined Penguin Club to learn about wild life and Spiders and the Red Knee Tarantula is my favourite Creature in Penguin Club.