

South Pacific Divers

SEPTEMBER, 1980

Below are alterations to the calendar published in the August newsletter. Other venues and times are unchanged.

- 28.9.80 Birchgrove Park Wreck Dive. Meet at Palm Beach boat ramp at 8.30 a.m.
- 4,5 & 6.10.80 Pt. Stephens - Wreck, Reef and Night diving
Meet 9.00 a.m. at Shoal Bay boat ramp on the Saturday. Contact Bob Smith 929-3313 (home) if your stuck for accommodation.

Tit Bits

From the President "Get your *!xx?! fees in"

The Committee, at a recent club meeting, decided that ex members, who because of geographical limitations can't make in to club meetings, receive the newsletter. e.g. Karl happily married in Singapore; Andy getting crabs in Townsville; Dennis sifting sand in Perth; Dave drinking at Wolli; Tubby drinking at Yamba, etc.

Plans are now underway (Bob Smith) to stage an underwater audio visual spectacular as a promotion for the next photographic competition in the new year.

The New Committee

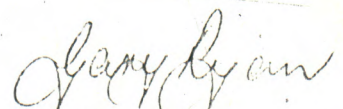
President	Rick Latimer	
Treasurer	Mark Livermoore	- 7136622
Secretary	Lyn Manly	- 7286808
Magazine	Gary Ryan	- (042) 715270 (042) 292111 (Bus.)
Photographic	Pat Manly	- 7286808
Social	Brenda Taylor	- 5234403

New Members

Rick & Loren Croucher	- 5230080
Penny Sullivan	- 5245065
Karl Stoegeo	- 5295307

Dont forget those newsletter contributions.

Till next time,


Gary Ryan.

New Amphibious 35mm camera from Nikon

A camera system adopting a complete departure in design from three former Nikonos models will be released throughout Australia in July/August by Maxwell Photo-Optics.

The Nikonos IV-A, with its advanced accessories, is announced as the replacement of the Nikonos III. The new camera is a product of Nikon's many years of experience in the manufacture of amphibious equipment for all-weather or underwater photography employing the most up-to-date electronics technology.

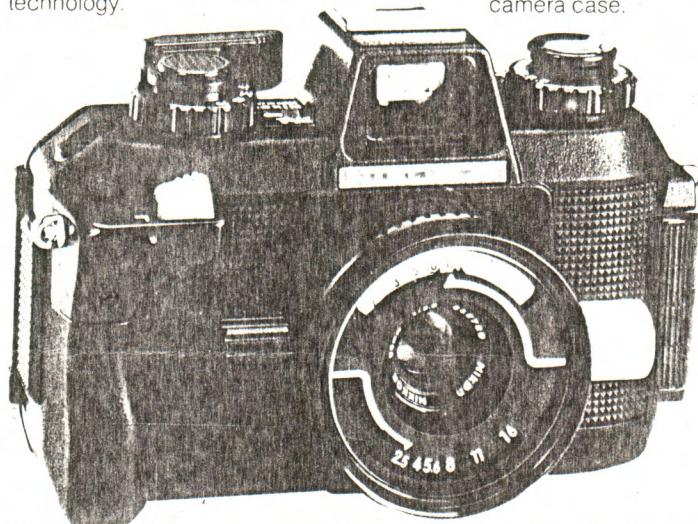
instance, to witness the entire finder image even when wearing a mask or goggles.

An accessory for the IV-A is the SB-101 Nikonos Speedlight — a newly engineered, bracket-mounting, automatic-type electronic flash unit.

Activating the SB-101 automatically sets the camera's shutter speed to the correct flash synchronization speed of 1/90 sec.

The ready-light inside the camera's viewfinder signals the photographer that the flash is ready to fire.

Other special accessories include a close-up outfit and companion compartment case, flash unit adapter, O ring set and leatherette camera case.



Its rugged design and operational ease are claimed with confidence to satisfy the requirements of professionals and amateurs alike.

The Nikonos IV-A's adoption of aperture-priority automatic exposure control means the user need only set the lens aperture and the camera will automatically select the matching shutter speed between 1/1000 sec and 1/30 sec steplessly for a correct exposure.

An LED inside the camera's viewfinder lights up to indicate that the speed is within this range.

Additional to A (automatic), the camera can be set to M which provides a mechanical shutter speed of 1/90 sec and to B (bulb) enabling use for long exposures.

The addition of aperture-priority automatic exposure to the Nikonos IV-A system for the first time provides the keen underwater photographer with versatile automatic 'above water' performance without the limitations previously imposed.

Part of the new design is the hinged-type camera back facilitating film loading and unloading, yet assuring that, when closed, the IV-A is absolutely watertight.

New also is the easy-to-use film advance lever which works in the same fashion as the lever of Nikon's SLR cameras.

Of notable importance is the high eyepoint viewfinder allowing the photographer, for

As with its predecessor, the Nikonos IV-A is usable underwater to a depth of 50 metres and at a pressure of 6kg/square cm.

Trailers are a vital part of the rig but get little care in return for the service they provide. Lawrie McEnally explains how to keep your trailer wheels rolling smoothly.

Practical boatowner

No let-down with kept-up trailers

In winter, the east coast current stops bringing its rich bounty to our waters and many men are inclined to put the boat in mothballs until spring. I can understand why many small boat men don't want to mix it with icy southerlies and cutting westerlies, but because the boat is idle doesn't mean things don't have to be done.

You can use a few of those spare weekends to do a bit of maintenance that probably was let go because the fish were biting. Particularly, I suggest you pay attention to the trailer. For all the work it does, the carrier of our precious craft gets very badly treated: dunked in corrosive salt-water, up to the axles in soft sand, dragged a few thousand kilometres over all sorts of roads and generally maltreated by the fisherman whose first love is his shiny piece of glass or tin.

Some of the problems involved with a trailer should be sorted out when you buy it and before you travel anywhere. Have whoever sells you the trailer give you the name and address of the bloke who made it. Go and see him, and make sure you come away with a spare wheel, and know what type of rim it is, be it Datsun, Morris, Holden or whatever.

Next, get the bearing numbers off him. Maybe he'll sell you two sets of bearings; if not you soon can get some from bearing sales centres around town. The other thing you need is a set of studs that bolt the rim to the bearing housing. These studs are rarely carried by anyone, and as I recently found out they can and do break.

Getting the studs can be a bit of a problem, but the trailer manufacturer will tell you who supplies him with his bits and pieces. Taking a punt, most trailer parts in Sydney come from Girlock, but each area will be different. Most auto dealerships will help if your wheel and hub matches the cars they sell and service.

The reason for carrying the studs may seem obscure to anyone who has not broken them. It's easy to fix a flat tyre, but

if there's nothing to bolt the tyre onto, then you're in real trouble.

Many people won't believe that this happens, but be warned: if you tow a laden trailer over 50 km of rough road, you may get up to two turns out of the wheel brace when you tighten the wheel.

When you have a spare wheel, studs with matching nuts and two sets of bearings, you have enough gear to travel safely around the countryside.

On the subject of grease, I picked up a can of Molykote BR-2 Plus last time I changed bearings. Up until then I had used normal car grease to pack the bearings. The problem with car grease is that it breaks down eventually with the addition of liberal amounts of salt water. I checked the bearings recently and after six months of hard use the new grease was as good as the day it went in. It also appears to seal very well, and at about \$5 a tin it is money well spent.

To service the bearings on your trailer, simply jack the axle off the ground and remove the wheel. Then prize off the seal, which covers the tension nut on the axle. This will be covered in rich, dark grease. Use a rag to remove the grease so that you can see the split pin that keeps the nut in place. Remove the pin, and with the aid of a big spanner, remove the tension nut.

Once this is done the bearing housing can be slipped from the axle and you can extract the bearings. Two things to remember: always have the boat trailer attached to the car if you are working on a single bogie trailer — they can and do fall. And just because the wheel spins without making noises like there's 10 kilos of gravel inside the housing doesn't mean you don't have to take the wheel off to service the bearings.

If the bearings are in good shape give them a wash in kerosene. Petrol is good, but deadly if you want a smoke. Once the bearing is clean, check the edges of the races for signs of wear. If it's still all right, then remove as much grease as you can from the housing with tissue paper and finish the job with a rag soaked in kero.

Check that the shims the bearing rolls on are free from marks. If they are then all you have to do is repack the bearings

and housing and put it all back together. If all is not well, then throw the crook bearing away and get a punch and knock out the shim.

If you clean the bearing housing properly you will find four grooves are provided for knocking out the shims. Throw the old shim away too. Obtain the nice shiny new shim, and gently and evenly tap it into place. This is done on both sides of the housing. You pack the races and then the housing, put the whole assembly back together.

To pack the races properly, get a good sized lump on two fingers of your right hand, then wipe it into the palm of your left hand. Pick up the bearing with the right index finger curled through the centre. Then firmly slap the race through the aforesaid grease and into the palm of your hand.

Repeat the procedure, rotating the bearing slightly with each slap. The bearing will quickly pack up. To finish the job turn the bearing over and give the side that is still shiny a few slaps as well.

When putting everything back together, take care that the seals are in good shape. Although these are not usually very waterproof, they do stop most sand and road grime from entering the bearings. If in doubt about the seals, particularly the inside one, then fit new ones. The outside seal is usually a light steel cap, and it seals well with the addition of a bit of grease.

To get the correct tension on the axle, wheel and housing turn the nut until it starts to take up a little firmness, then give it half to three quarters of a turn. Check that the wheel rolls fairly freely, and also that there is no sideways wobble. If you have some wobble, tighten it up a little more, but not so much that you stop or limit the free movement of the wheel.

There are also a few bits and pieces that can be done to help the wheels to do their job. The first is wheel balance. A great many people don't believe in this one, but if you tow the trailer long distances, and if you tow at high speeds, then wheel balance is a good idea. The balance eliminates vibrations and lets the trailer track better at high speed.

Above: All the bits for a bearing change.
 Centre: Removing axle nut.
 Bottom: Packing grease around bearings.

Lately there has been some publicity about systems that are designed to keep water out of bearings. These fittings have exterior grease nipples so that you can pump the bearing area full of grease and keep it full by topping up regularly. The principle is that a bearing housing full of grease will not allow water entry and thus the bearings will last longer.

Though it is a good system in principle, it does not seem to work as well as it should. I have a friend who manufactures trailers, and many of his clients ask for the seals to be fitted.

Some have returned with failed bearings and told him the seals were fitted wrongly, but the fact is that with any method it's virtually impossible to obtain a perfectly tight seal.

When a boat is towed, the trailer hubs warm up quickly. When the trailer is backed into the water at the end of the trip the hubs cool suddenly and the air inside contracts, creating a vacuum which can suck in water.

Once the seals go and the waters get to the grease, lubrication stops and rust sets in. The bearings then run hotter and hotter until they seize.

Without the special seals my trailer, with a housing full of Molykote, is giving excellent wear considering it travels nearly 20,000 kilometres a year. I go through a set of bearings a year. Usually I have a look every four months or so, and I pull the bearings out and fit new ones before they give trouble.

Tyre pressure is important, both to the life of the trailer tyre and to your fuel consumption. Trailers fitted with mini-wheels are best avoided — in my view they are super-sensitive to bearing failure, due to the high number of revolutions the tyre does at speed. If your Holden tyre is spinning at 3000 rpm at 100 kilometres per hour then the poor old mini-wheel is doing about 6000 rpm.

If you travel around a bit, maintenance is vital; if you just tow the boat to the local ramp and back the demands are less. Serious breakdowns don't usually occur on short trips. Prior to any major trip, check the bearings and the tyres. Always carry a spare wheel, wheel studs and complete bearing assembly.

A roadside change is preferable to leaving the boat and trailer up on bricks while you drive from town to town looking for the parts you need. An interested passer-by may look over your boat for the gear that he might fancy.

