

The Calypsophot

by Steve Warren

Back in the early fifties as the Aqualung heralded a new adventure sport it was natural that there would be a demand for underwater pictures. The problem was how to safely submerge a camera. Single lens reflex cameras were uncommon in the fifties, so the choice of camera was really between the bulky twin lens reflex models typified by the Rolleiflex and the miniature rangefinder models represented by the quintessential Leica 35mm.

The Rolleiflex inside either the Hans Hass designed Rolemarin or the Cousteau inspired Ondiphot provided the benefits of greater image quality compared to 35mm. The twin lens design which mounted a lens linked to the viewfinder above the actual taking lens allowed the photographer to accurately focus on small subjects like fish. However the TLR cameras normally had fixed lenses precluding the use of wide angles and were bulky and heavy.

Rangefinders like Leicas provided up to three times as many exposures per dive and their standard lenses could be exchanged for moderate wide angles (all that was available fifty years ago). However the rangefinder focusing which relies on moving mirrors linked to the lens focusing mechanism and has to be viewed through a tiny window were not practical underwater. This meant that the photographer had to either accurately guess the distance or measure it off. The housings were smaller than for medium format - but not nearly as manageable as one might expect. Jerry Greenberg, one of the world's first successful professional



French lens manufacturer Som Berthiot stepped in to make the 35mm lens.

underwater photographers, talks of the bronze housing for his Leica weighing in at 5kg.

Enter Cousteau. In the forties Cousteau had created the Undersea Research Group, funded by the French Navy. Part of their remit was develop diving equipment for Cousteau. Jean De Wouters was on the design team. A Belgian, De Wouters was an engineer who has worked in the aeronautics industry, a background he shared with that other legendary underwater camera designer Dimitri Rebikoff. And, like Rebikoff, De Wouters had developed other equipment for diving, including scooters.

Cousteau wanted a smaller alternative to a 35mm rangefinder inside a housing. De Wouters went to work. And came up with a truly original concept. Rangefinder cameras of the era were quite compact. However a wide body helped increase the accuracy of the focusing mechanism which used two windows set apart from each other. He ditched the coupled rangefinder, reducing the overall width

of the Calypsophot. For surface use he fitted a direct optical finder. He added a standard pattern accessory shoe for fitting an external cross hair viewfinder for underwater framing.

Housings tend to get bulky because they have to be larger than the camera they contain and allow additional space inside for controls to be depressed, swung out and rotated. The larger the housing has to be to accommodate the camera, the thicker the walls need to be to take the pressure being exerted over the housings entire surface area. This in turn leads to heavier housings and with some models extra ballast to offset the buoyancy.

De Wouters built the Calypsophot to be self contained. The outside of the camera is also the pressure hull. The low volume of the camera body enabled a relatively thin metal wall to resist pressure to a depth of 50 metres. Because the body could be expected to flex slightly under pressure, he mounted the film plane pressure plate onto the inner



body where it was not in direct contact with the outer shell. This eliminated problems with focus that might have occurred had the plate been attached to the pressure hull and allowed to move.

Most conventional cameras of the day used wind on knobs rather than levers to advance the film. They were slow to use and hard to operate without taking the camera away from your eye. There's evidence from blueprints of the Calypsophot that De Wouters considered this approach. But he rejected it in favour of a far more elegant solution.

De Wouters combined the shutter release and the wind on mechanism. Operated by the forefinger, a short smooth pull fires the shutter. A second pull advances the film and cocks the shutter for the next picture. It is fast and precise. The innovative design carried over to the Nikonos 111

and its demise with the arrival of the Nik IV-A was much mourned.

De Wouters came up with a simple two claw bayonet mount to allow different lenses to be fitted. Even this feature had more than one role.

Whereas most housings were only opened for film changes after lengthy battles against bolts, clips and over centre locking bars, often followed by dismantling the camera from the housing control linkages, De Wouters found a simpler and more efficient solution. He used the lens to lock together the two parts of the camera body. The camera could be separated for film loading in seconds without tools. Just a quick tug and twist of the lens to remove it and unlock the camera body followed by lifting the inner body out of the outer by pushing up on the strap lugs and the Calypsophot was ready for loading.

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With just a hint of nationalism the focus scale was apparently marked only in metres. Rather than use confusing depth of field indicator lines that are normally inscribed on the barrel of topside lenses, De Wouters used two moving pointers, linked to the aperture control, to exactly define depth of field.

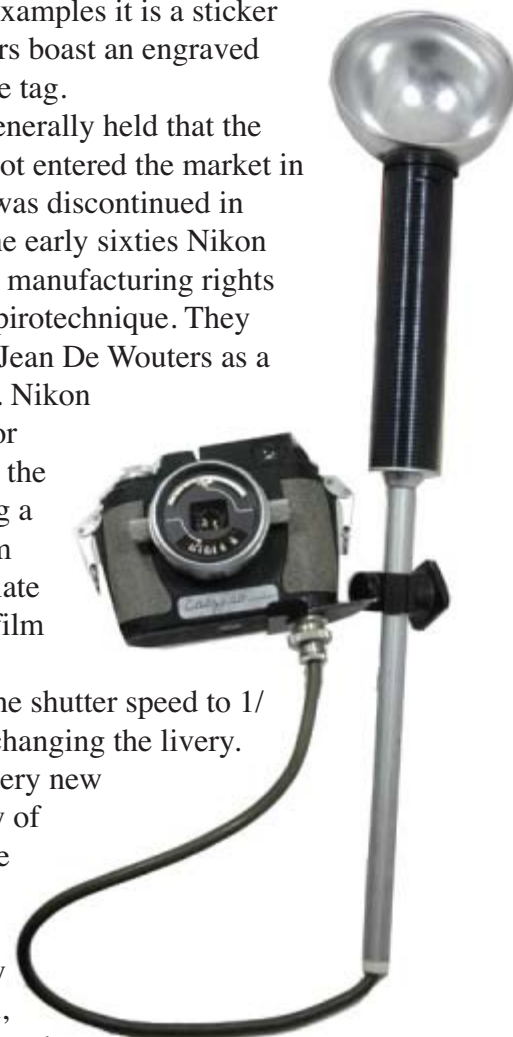
Like any good legend, a few mysteries surround the Calypsophot. Perceived wisdom is that the camera had a top shutter speed of 1/1000th of a second. But it may be that some later models only had a top speed of 1/ 500th. It's thought the higher speed proved superfluous and added to the cost. La Spirotechnique are usually credited with manufacturing the camera, but SOS have also been mentioned as possible makers with some models allegedly being marked 'Made in Italy'. Another minor difference between models is the name plate.

On some examples it is a sticker while others boast an engraved metal name tag.

It's generally held that the Calypsophot entered the market in 1959 and was discontinued in 1966. In the early sixties Nikon bought the manufacturing rights from La Spirotechnique. They employed Jean De Wouters as a consultant. Nikon

made minor changes to the body, using a hinged film pressure plate for easier film threading, reducing the shutter speed to 1/ 500th and changing the livery. The then very new technology of through the lens metering was briefly considered, but discounted

(it eventually appeared on the Nik IV-A in 1980). They replaced the 35mm f3.5 lens with a Nikkor that was one stop faster. An imperial scale was added, along with filter threads. They retained the depth of field indicators and kept the original lens mount. The flash blanking plug was equipped with threads for tripod mounting. The prototype of the Nikonos 1 made its public debut as a prop in the 1964 Bond caper "Thunderball". In fact there's a



break in continuity here. Bond first uses a Calypsophot to shoot infra red pictures at night beneath the hull of the Disco Volante. Later he passes Bondgirl Domino a Calypsophot which disguises a Geiger counter. In its next scene it has changed to a Nikonos.

The Nikonos 1 went on sale that same year. Calypsophots continued to be sold for a further two years. Speculation is that later Calypsophots were assembled from spare parts or that Nik 1 components may have been used, possibly accounting for the rumour of a lower top shutter speed on some models. In '68 the Nik 11 replaced the 1 with minor changes internally and a fold out rewind crank in place of the knob.

Calypsophots are very much collectors items. Optics is lucky to own two examples, along with a framefinder, bulb flash unit and a French instruction manual. Mike Warren, our counterpart in France, is especially fortunate - he owns a model that saw service aboard Calypso itself.

They are not inexpensive. Recently a Calypsophot offered on E Bay attracted over £500.00. But if you want to own an icon that defines underwater photography, this is a must have.

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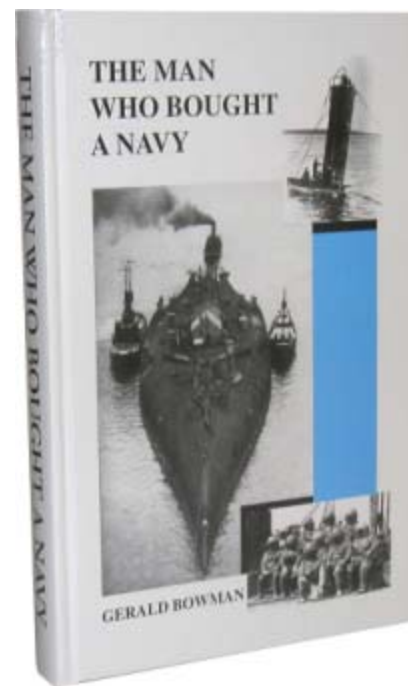
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