



AN EXPLORATION GROUP REPORT

STOCKING THE
KROM LAKE POOL

By ALAN YATES

Photos: R. O. Bell and A. Yates

Preparing the plastic bags on the hatchery truck, in a shady bend of the national road in Du Toits Kloof.

THE stocking of the Krom Lake Pool this season by members of the Exploration Group of the Cape Piscatorial Society was an undertaking of more than usual interest. The success of the operation, moreover, has opened up considerable possibilities for the future.

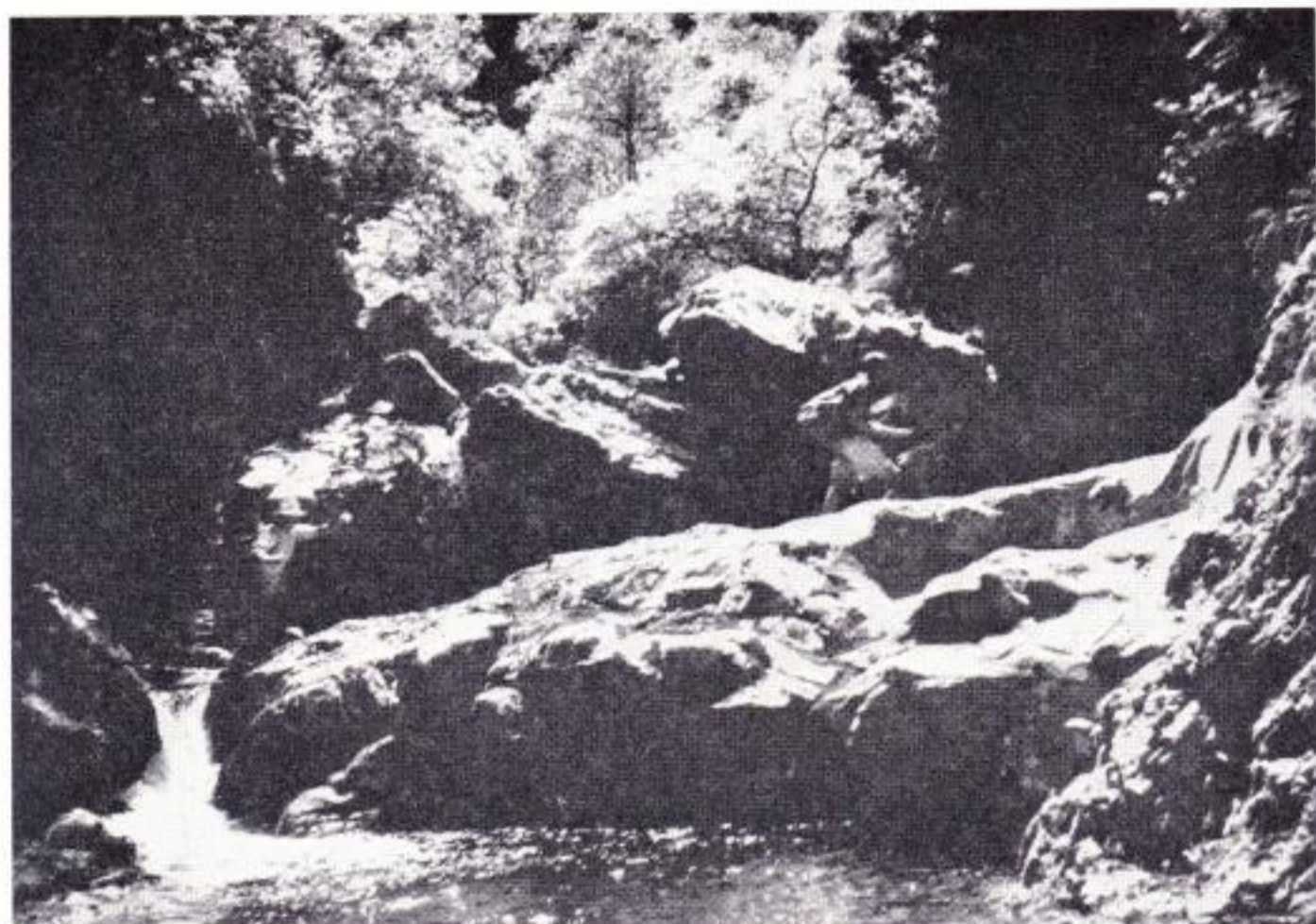
The lower section of the River Krom was described in detail in PISCATOR No. 40, for September, 1957, by Mr. D. S. M. Macdonald, and the photographs of the Lake Pool which were included in this report aroused widespread interest. It will be recalled that the lower section of this stream (which joins the Smalblaar midway between the road tunnel and bridge in Du Toits Kloof) comes to an end from an angling point of view at the 40-ft. high Wedge Falls. The Lake Pool lies a hundred yards or so beyond the top of the Wedge Falls and is itself fed by the magnificent 300-ft. high Lake Waterfall.

This splendid sheet of water, certainly the largest so far discovered in the Du Toits Kloof area, was, of course, barren of fish. Observations by members of the Exploration Group suggested, however, that it was capable of supporting a not inconsiderable population and it was decided to embark upon its stocking in November, 1957.

Involving a scramble along the bed of the Krom itself and the climb up the side of the Wedge Falls, the stocking of the Lake Pool would have been a project of some difficulty had it not been for the recent development of fingerling conveyance in light plastic bags. The Krom Lake stocking with 1,000 trout was the first occasion on which this method was used in the Western Cape for a lift of any considerable distance, and the fact that over two hours elapsed between the "bagging" of some of the fish and their eventual release into the Lake Pool, coupled with the fact that not a single fingerling was lost, speaks volumes for the efficiency of the system.

The method used was, briefly, as follows: Lightweight plastic bags of about one gallon capacity were half filled with water into which was placed approximately 50—60 small trout fingerlings. A short length of stout rubber piping was then inserted into the neck of the plastic bag and the latter was drawn tightly round this and tied fast.

Air in the bag was then evacuated and replaced with pure oxygen, the latter being put in under pressure so that the bag was virtually "blown up" with it. A suitable bung in the rubber tube at the neck kept everything tight and the bags themselves were placed into stout cardboard boxes. These latter were subsequently carried up the Krom kloof in normal rucsacks.



Sunlight and shadow. Moving up the Krom River kloof en route to the Lake Pool.

A party of sixteen enthusiasts assembled in Du Toits Kloof early on the morning of Saturday, November 16, 1957. The trout, plastic bags, boxes and oxygen cylinders were brought out from the Jonkershoek Hatchery by the Curator, Mr. N. Blichfeldt-Petersen. It had been arranged that the lift should start from the Elandspad Bridge, but the actual loading of the fish into the bags was carried out on the Paarl side of the summit of the Du Toits Kloof road in order to take advantage of some shady trees.

The carry up the Krom went off very successfully. The party quickly sorted itself out into small sections with varying ideas of what constituted the proper speed for movement up the rough and stony kloof on a hot morning, and while some of the



At the edge of the Krom Lake Pool. The plastic bag containing the trout has been removed from its carton and the neck tube is being untied to release the oxygen.



The second stage in the planting operation at the Krom Lake Pool was equalising the temperature of the water in the bag with that of the pool. The open bag is lowered into the pool and water is scooped in a handful at a time.

younger members of the group arrived at the Lake Pool in just over an hour's going, it was about two hours before the last "parcel" of fish arrived and was planted. All members, however, reached the pool safely and the trout were placed variously all round the perimeter of the Lake. As has been mentioned, not a single fish was lost and some three hours later they appeared to be very much at home in their new surroundings.

It now remains to see how they will thrive in this extremely interesting piece of virgin water, and any member of the Society taking a fish in the Krom Lake in the next season or so is very earnestly requested to report its weight, size and condition to the Hon. Secretary. Some samples of the natural food in the Lake Pool were brought back by members of the expedition.

Members of the Cape Piscatorial Society and friends who were present were: Messrs. H. J. Ackermann, R. O. Bell, W. F. Buchanan, G. H. Godley, A. C. Harrison, A. B. Hazell, A. D. Helps, P. Keeble, C. Kisch, G. K. Lestrangle, D. P. Liebenberg, K. E. Littlefield, W. G. McNaught, A. Malan, D. S. Marais, A. M. Rand and A. Yates. A colour cine film record of the operation was made by Mr. C. Kisch.

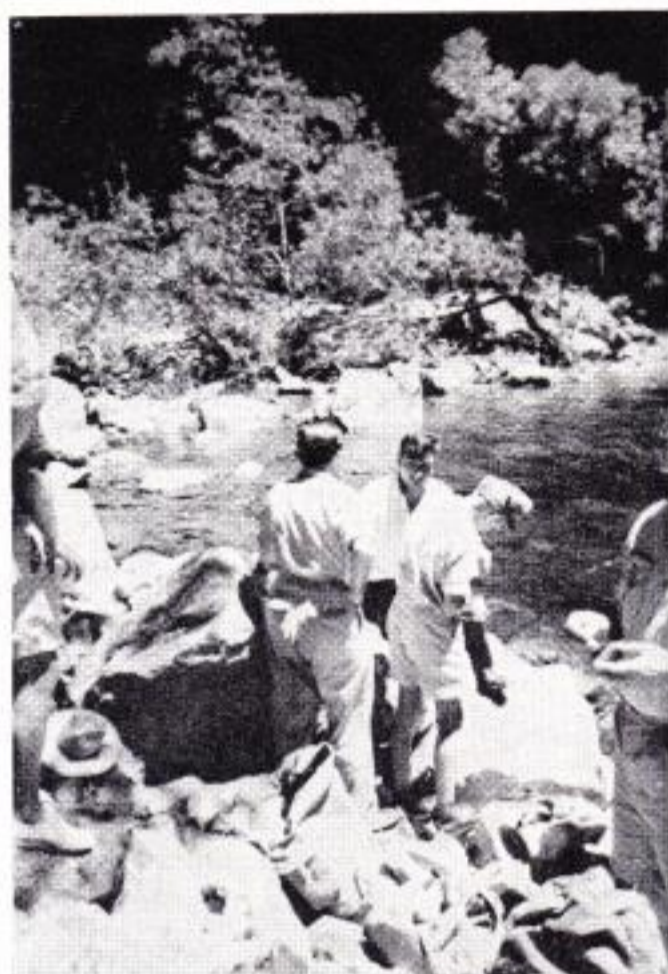


Finally, the water temperature equalised, the trout are allowed to swim out of the plastic bag into their new home.

Some of the Exploration Group relaxing at the Krom Lake Pool after the trout planting.

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The operation described on the opposite page, balancing the water temperature and oxygen content, took about five minutes in this case; and the care with which it was performed by all members of the party was one of the details which contributed to the 100 per cent. success of the transport.



The success of the Krom Lake stocking opens up several interesting possibilities for the future, not the least being the stocking of the upper reaches of the Elandspad. It is hoped that the Exploration Group will actively concern themselves with this and other projects next season.

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ADDITIONAL NOTES

The method of shipping fish in sealed containers with the space above the water filled with pure oxygen has been used for some time in America and Europe, particularly for the transport of tropical aquarium fishes. In PISCATOR No. 39, the method was mentioned in connection with the air transport of smallmouth bass from Canada to Sweden.

The method used for the Krom River stocking had been previously tried out for the air transport of small trout fry from the Jonkershoek Hatchery, and in tests with larger trout. There was an ample safety margin of time in the case of the Krom River stocking, but care was taken to keep the water temperature low until the carrying party took over.

The bags used were made from polythene sleeve, 18 inches long by 12 inches wide, flat measurement, sealed at one end. As the plastic was light, not more than about 10 lb. of water was advisable, but rather less than an Imperial gallon was put in for the Krom River carry.

When the water (from hatchery source) was put in the bag and the fish poured in from a small hand net, the wide open end of the bag was gathered around a thick rubber tube, 6 inches long, $\frac{1}{2}$ -inch external diameter, $\frac{1}{8}$ -inch bore, and secured tightly with nylon cord. Air was then expelled by squeezing and the end of the tube placed on the nozzle of a pure oxygen cylinder and the bag inflated. The tube was then sealed with a nail-head or rivet to fit tightly.



At the Krom Lake Pool. Other members of the Exploration Group party resting after the release of the 500 brown and 500 rainbow trout they had carried up the kloof.

In practice, each polythene bag was placed in a strawboard carton, just before it was inflated and sealed. These cartons were of a correct size to hold the inflated bag in an upright position. They were sealed with gummed paper, and the tops marked with a pencil.

For the Krom River stocking, quite small fingerlings were selected, not exceeding about 2 inches long. There were 500 brown trout and 500 rainbow trout.



Mr. W. G. McNaught, with some helpers, collected samples of the aquatic invertebrates in the Krom Lake, and brought them down, most suitably, in one of the plastic bags in water. This collection was typical of the fauna of upland pools in the Cape Western mountain system, and the following were recognised:—

CRUSTACEA: "Freshwater Shrimps", *Gammarus sp.*, probably *nigroculus*, with pigmented eye spots.

INSECTA: Two Corydalid "Cape Alder-fly" larvae, about $1\frac{1}{4}$ inches long, with tracheal gills on lateral processes, so probably *Taeniochauliodes ochraceopennis* Esb.-Pet.

Numbers of small water beetles, and juvenile midge larvae.

Two May-fly nymphs, Leptophlebiidae, *Aprionyx peterseni*, the "Pied Dun", the common species in the Witte River over the watershed.

Caddis larvae: One triangular sand-grain case, probably *Molanna triangularis*; one Leptocerid swimming larva in tubular sand-grain case.

A.C.H.