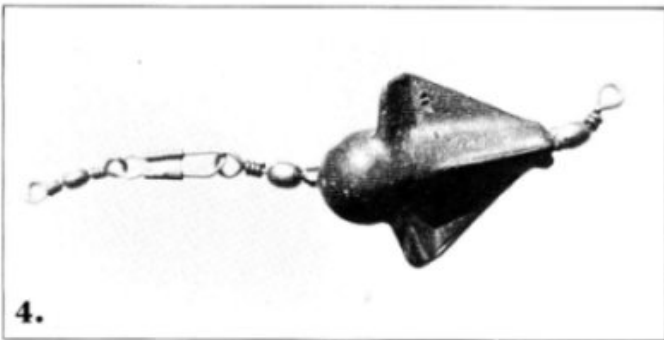
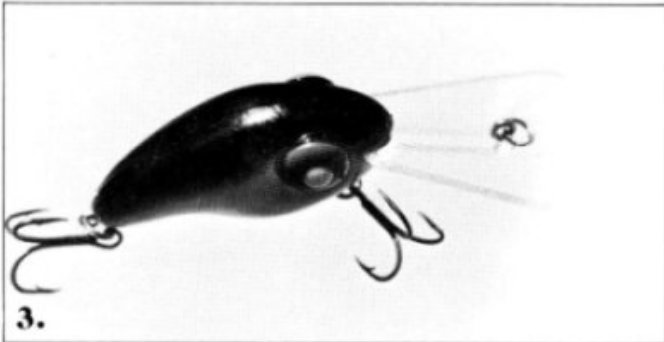
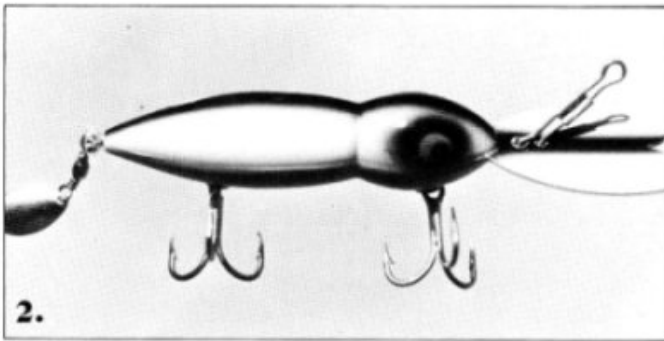
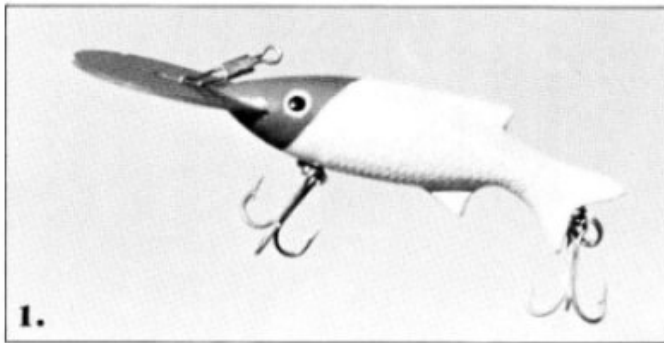


# LURES IN DEPTH

## *How Deep Do They Dive?*

Do you really know what that lure is doing down there? There's really only one way to find out; put on the diving suit and go down and have a look. That's the approach Frank Prokop took in his trailblazing article on deep diving lures published three years ago, and now Prokop collaborates with Rod Harrison in an even more detailed, updated study of the performance of over 70 popular lures.





1. The Tri-Angle 'Down Boy', the dark horse of el cheapo deep divers, retailing under \$5.00 at time of writing and responsible for some outstanding bags of big yellowbelly.

2. The Hellbender; still the one to beat, but challengers are emerging.

3. The Ashley Probe, not available in Australia as far as we know, but obtainable direct from Rabble Rouser Lures, P.O. Box 927 New Philadelphia, Ohio U.S.A. 44663.

4. The Javelin trolling sinker. It will go deep without too much weight penalty.

Three years have passed since Frank Prokop did that revealing story on the running depths of various lures. In that time the variety of lures on tackle shop racks has expanded faster than parliamentary salaries. There's no question about it, lures are a growth industry. Whether they catch fish or just fishermen is another matter.

Those spinners, spoons, jigs, plugs and minnows we have to choose from nowadays fall into three main groups — products from the ultra-competitive American market, locally crafted minnows and plugs (which, when you analyse the functions of some, are truly state-of-the-art) and lures from the Orient, that cost less and vary considerably in quality.

There is some spirited debate amongst the makers and users of these new generation lures on the kind of performance levels they're achieving. Much of the argument centres on intrinsic issues like subtleties in action. You have to ask the fish to get the answers to those questions.

Something a little more tangible namely, the running depths of lures, has also been seized upon by manufacturers and anglers alike, fuelling the fires of controversy. In the American bass belt, it's almost war, with vast sums being spent on research and development for the kind of plugs that'll get the bends. The resulting claim and counter-claim advertising actually quotes running depths.

### DIGGING DEEPER

So why does a lure need to go deep? At the risk of oversimplifying what is really quite a complex question, it is a matter of having to reach down to the fish. When not actively feeding, sportfish like barramundi, mangrove jacks, sooty grunters, Murray cod, yellowbelly, bass, redfin, trout and many others this piece also relates to, can spend most of their time in the low water levels.

Under those conditions they'll tend not to get excited about a lure that's passing way over their heads. But should it come a bit closer, predatory fish programmed by nature to be opportunistic or territorial, may well react. Just where this line is drawn depends a lot on the mood of the fish; switched on or perhaps taking a more detached interest in what's going on around it.

Different fishing situations dictate the need for some lures that'll dive deeper than others. Deep divers are compulsory items in the tackle box on cod and yellowbelly water, where the most consistent results come from working deep and slow. Barra and fellow travellers will move further and faster to locate and

hammer a lure. They're generally found closer to the surface, where most of their feed travels and seem to prefer lures with a more rapid action; those which shimmy rather than wobble.

## LURE LORE

The significance of depth (or, more to the point, that priceless knowledge of how deep your lures are running in relation to bottom) is something overlooked by the majority of anglers; the 90 per cent who get 10 per cent of the fish.

When one delves into lure logic, the whole basis of why you might tie on a certain lure needs to be closely looked at. I know! The majority of lure users work on past results; gut feelings or simple blind faith. One's reasons can go beyond that; to a kind of cataloguing that classifies lures according to their action, working speed envelope, size, depth capabilities and colour.

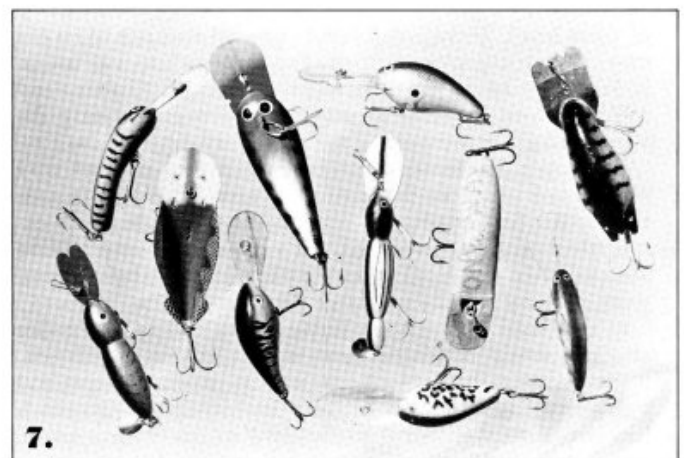
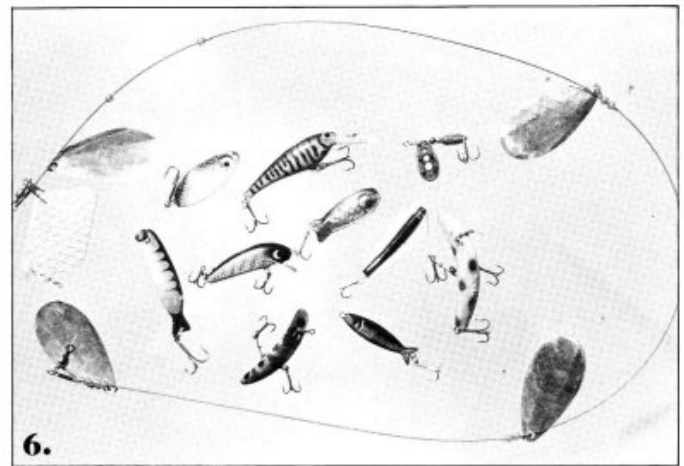
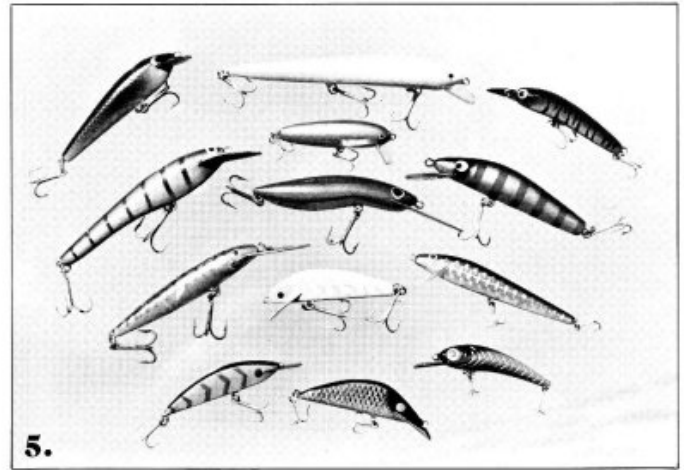
There's long been, and always will be, spirited argument amongst lure chuckers and trollers as to what are the real priorities amongst those characteristics. The 90 per cent view is colour, which I've heard disputed in much the same way as Jimmy Swaggart disagreed with Darwinism.

The real art in lure fishing, the gift from the gods, is to be able to read the water and the prevailing conditions and choose the lure which dove-tails with those circumstances. That's why the lures with broad applications which are able to handle angler-induced variations to their inbuilt performance are front-benchers in our tackle boxes. By being aware of the flexibility some lures allow, fishermen are able to vary presentations — like a good bowler who mixes his balls so a batsman doesn't know what's coming next. It makes a difference.

An inter-related set of features incorporated in the design of a lure determines the depth to which it dives; whether it plummets almost vertically or takes a more gently sloped path down to its maximum lepth. The key is the lure's bib, a kind of inbuilt paravane. Its size and shape counts in the dip factor, but undoubtedly the key to it all is the geometrical relationship between bib, tow point and the centre line of the lure body.

Those lures that have those things more or less in a straight line — like the Hellbender series — tend to go deepest. Alternatively, the greater the angle between lure body and bib, the more resistance on the lure as it is drawn through the water and the shallower it will run.

This resistance, this buffeting effect the water has on the lure bib, is translated into visible movement —



5. The 'tropical' lure group, aimed at the likes of barra, jacks and fingermark, where extreme depths aren't so critical.

6. Trolled offerings aimed at trout. Depth is a critical element in impoundments during Australian summers but there is a tendency to fish way above where the fish are holding.

7. Big bibs are a hallmark of deep diving lures. The lure marked 'One Way' is a custom-painted Flatfish.



not always fish-like — by the whole assembly. The head nods, the tail wags. Lure running depths and lure action are inseparable. The link between the two has considerable latitude. Play around with one and the other is compromised.

### CAMP TALBINGO AND TEAM PROKOP

The usually clear and uncluttered waters of Blowering Dam were the test site for Frank's first story on deep running lures. We wanted to return there for the '88 update, but someone had pulled the plug, draining the lake to less than 30% capacity. The rock face across Blowering Creek, the intended test site — and the best trolling alley on Blowering for real fishing — was high and dry by at least 60 metres.

The search for clearer water took the crew higher into the Snowy Mountain foothills. There we found Lake Talbingo in a crystal clear condition and set up a base camp in picturesque Talbingo Caravan Park. The fact that the higher we went the cooler the waters were likely to be, did not escape mention in conversation, particularly amongst the underwater members of the team.

The complex and exhaustive testing needed to establish what are the deepest lures, required



Above: Team Prokop taking five

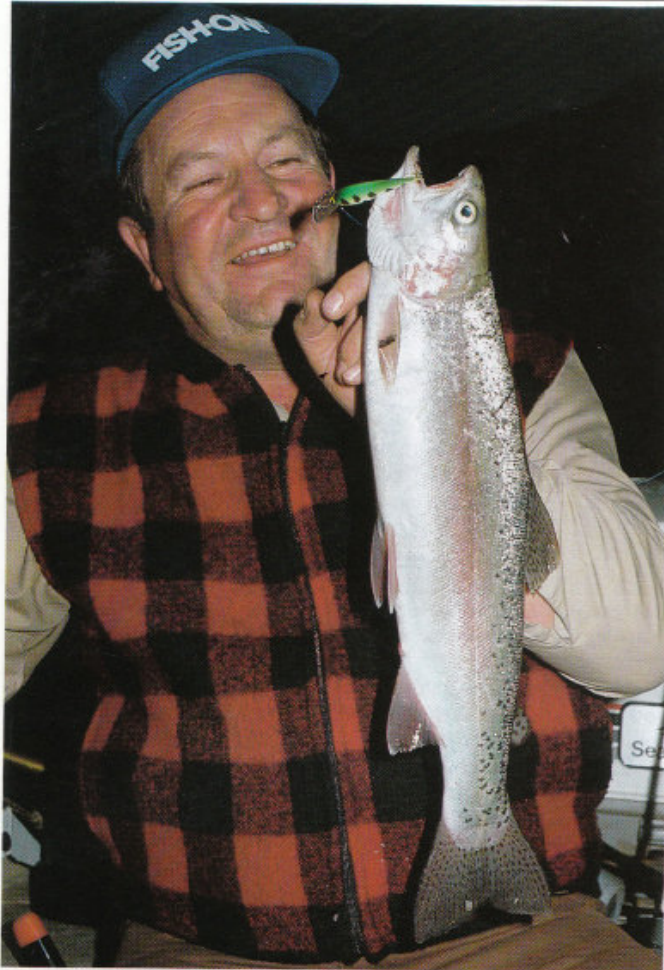
Left: The Talbingo depth gauge.

experienced hands and eyes, both above and below the lake surface. Team Prokop consisted of Frank, his wife Sonja and Frank Prokop Senior who between them had racked up countless hours and miles trolling the big freshwater lakes. They shared surface responsibilities.

The underwater element consisted of Keith Chilcott, Jeff Nemeč, Dan Prokop and fish biologist Steve Thurston, an energetic biologist who has been very successful with native fish and has been responsible for their stocking in New South Wales impoundments. They also shared considerable lure fishing experience, which was invaluable in communications with the boat crew on what speeds were producing the most attractive action and deepest descents by the various lures.

The divers were wary of Talbingo's frigid reputation. The sign at the boat ramp warning that immersion could be fatal did nothing to calm them. A quick dip with the thermometer revealed a comfortable 21.8°C at the surface. The divers were far from convinced. They were anticipating a brass monkey kind of thermocline waist level. Tentative descents proved that not to be the case. To our complete surprise the thermocline was found at 15 metres; an extremely perceptible layer, 21°C above and 11.5°C below. Editorial requirements prevent relating the words which accompanied the discovery. The depth and intensity of the thermocline explains why no real fish were caught during the tests. This was in contrast to the first attempt at this kind of story where the extremely healthy Blowering Dam yellowbelly were willing associate field testers. Only redfin and a lone kilo brown trout were seen by the divers above the thermocline.

In this kind of shootout, liable to get one in a crossfire should some people's pet lures not go as deep as alleged, it was essential that they all



*Geoff Floyd, well known outdoors trade personality took this healthy Wyangala rainbow on the Bennett/McGrath diver.*



*The Niugini bass — toughest of them all. Peter Newell's Scorpion is one of the few lures that stands up to this most acid of tests.*

compete on an equal footing and be subject to identical test criteria. This included trolling each lure over the same course on the same length of fishing line, in this case a measured 20 metres — from rod tip to lure — of 10lb breaking strain fluorescent yellow Stren, which pleased the underwater element of the team no end. But it raises the question that if humans can see the line, so can fish.

The course was set out with a regatta type lane to prevent variations in the direction of the test boat. The lures were towed one at a time over this route. Boat speeds were varied so as to provide the maximum attainable depth with the of lures towed over the course. The fact is that different lures require varying trolling or retrieve speeds to achieve maximum operating depths.

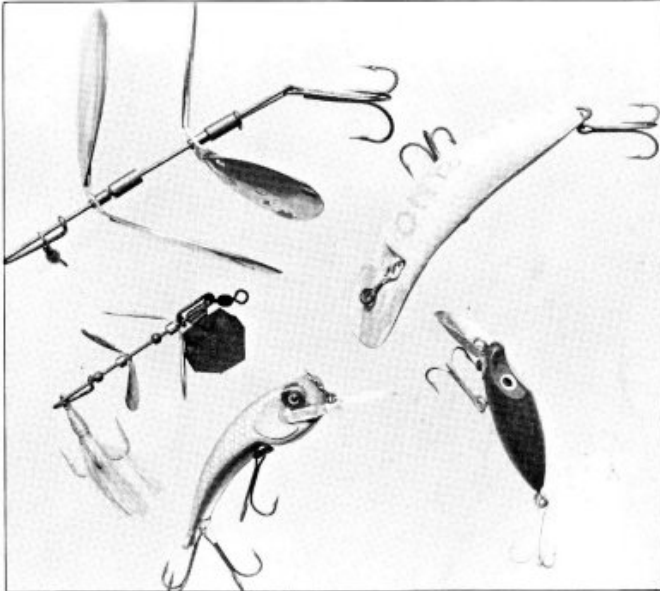
To put that statement within the context of this piece, consider that an F4 Flatfish, the slow coach amongst our range of candidates, would not troll at anywhere near the speed needed to get a Rapala CD-11 to bottom out. Conversely, the CD-11 comes across as a rather nicely painted piece of inert timber — nothing more — when pulled at the

crawl that has the Flatfish working frantically. The remaining variable, the angle of the trolling rod, was nailed down as much as was humanly possible by it being hand held, tip just skimming the surface, for the duration of the tests; and just in case there happened to be a strike. As it happened a suicidal fish-finger size redfin turned out to be the only other underwater party interested in proceedings.

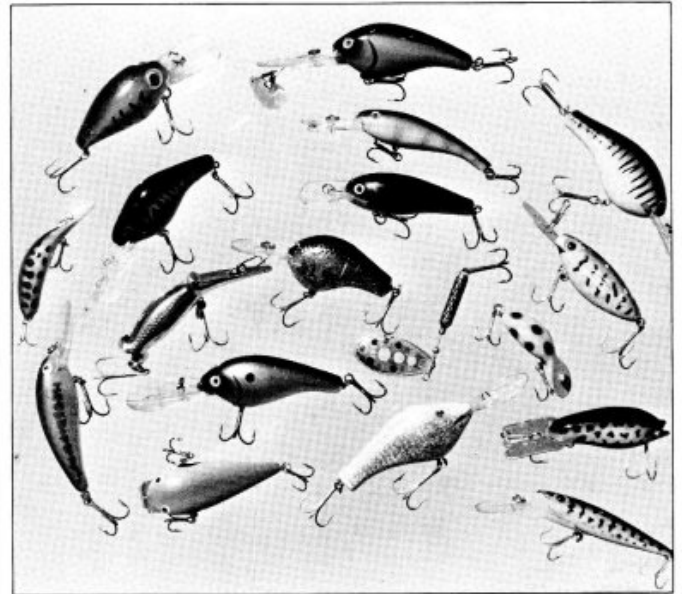
The actual yardstick running depths were measured against was a kind of adaption of those measuring sticks they use for pole vault events. In our case it was a lengthy piece of conduit graduated in 5cm increments. This was aligned with the course and secured to the bottom so that on each pass an accurate reading could be made. The findings were also enhanced by the precise readings of the Lowrance X-30 sounder in use.

## **FINDINGS**

In the table hereabouts, you'll see how they ran past the post, from top to bottom. Depths are shown in metres. The classification category describes both lure type and appropriate species/water, but is intended only as a rough



Old favourites for Australian inland waters; aeroplane spinners, original rubber Flopy, T50 Flatfish and Bellbrook Deep Diver.



A group of lures primarily aimed at bass. Bass fishermen are among the sport's more avid lure collectors and users.

guide. Fish are fish and so very frequently cross the boundaries our perceptions place on lure classification.

The distinction we draw on suggested waters for the various lure types is equally hazy. For the record it's worth mentioning that barramundi have been taken on bass lures; yellowbelly have been taken on barra lures; flathead on trout lures; and even yellowfin tuna have been known to hit trout lures. Such captures can be blissful flukes, or made by fishermen who, like the fish, aren't hamstrung by semantics. It's horses for courses however and our advice is to stick with proven types if you're not sure.

With deep dive capabilities being very high on the list of credentials for Murray cod and yellowbelly lures, it isn't surprising that the deep end of the list is dominated by lures well suited to inland waters, especially the big dams where the fish tend to be

deeper than in rivers.

What may come as a surprise to many is the performance of Australian made lures, with three places in the top 12; the Deepest Dozen. These were up against the deepest of the deep; some unavailable here that had to be specially imported for the survey.

The depths reached by the Tri-angle Down Boy, Rapala CD-11, Ashley Probe — only a ¼ oz plug — The Bellbrook Deep Diver (redundant, but great in its day) and the tiny ½ oz Mudbug, all came as shocks.

The American designed, Japanese built Down Boy is an el cheapo. We could only find the small model. It has a big brother that's worth mentioning. Brisbane anglers John Wade Lloyd Wildman used it in Copeton Dam last summer to take the best catch of stud yellowbelly I've so far heard coming from the place.

The Kent Barely Legal and large Shakespeare Helldiver are also clones of established designs that are good value for money. We did find however, that sufficient bummers still exist amongst Oriental lures to justify a caveat emptor attitude on the part of prospective buyers. Cowbells performed poorly. Their main attribute is in attracting active, feeding trout to strike, provided those fish are fairly close to the surface. Should they be holding below a thermocline, forget it. Try something else!

### POST MORTEMES

Lures like the Tasmanian Devil, Celta, Pegron Minnow, Baltic Minnow and Teeney Terror ran very shallow because they had no bib to dig them

## THE DEEPEST DOZEN

Bomber Water Dog — large	Plug/freshwater	5.30
Extractor	Plug/freshwater	5.30
Helin Flatfish T50	Plug/freshwater	5.40
Arbogast Mudbug — Magnum	Plug/freshwater	5.60
Bomber Magnum Deep Diver	Plug/freshwater	5.60
Down Under Boomerang	Plug/freshwater	5.70
Newell Kadaitcha	Plug/freshwater	5.90
Bill Norman Catch 22	Plug/freshwater	6.00
Mann's 20+ Deep Pig	Plug/freshwater	6.00
Shakespeare Helldiver — large	Plug/freshwater	6.00
Spoonplug Series 900	Spoon/Murray cod	6.40
Magnum Hellbender 7/8oz	Plug/freshwater	6.45

## THE RESULTS — HOW DEEP DID THEY DIVE?

LURE NAME & SIZE	TYPES & USES	DEPTH	LURE NAME & SIZE	TYPES & USES	DEPTH
Tasmanian Devil	Spoon/trout	0.95	Newell Scorpion 5"	Minnow/tropical	2.90
Celta #2	Spinner/trout	1.05	Rapala Shad Rap	Minnow/freshwater	3.10
Pegron Minnow	Spoon/trout	1.10	Rapala Fat Rap — small	Plug/freshwater	3.10
Teeney Terror	Spoon/Freshwater	1.10	Helin Flatfish X4	Plug/trout	3.20
Cowbells — light	Spoon combo/trout	1:10	Rebel Deep Wee R	Plug/freshwater	3.20
ABU Toby 12g	Spoon/tropical	1.10	Lead's Lure — 5" model	Minnow/tropical	3.20
Baltic Minnow	Spoon/trout	1.40	Storm Hot 'n Tot ¼oz	Plug/freshwater	3.25
Killalure Trout Bait	Minnow/freshwater	1.55	Shakespeare Deeper Dan	Plug/freshwater	3.30
Elliot Darwin Dart 4"	Minnow/tropical	1.60	Elliot Lure 5" model	Minnow/tropical	3.30
Austin Chandler A40	Minnow/tropical	1.60	Storm Wee Wart	Plug/freshwater	3.45
Canadian Spoon 12g	Spoon/trout	1.60	Cordell Wally Diver	Plug/freshwater	3.60
Shakespeare LU5	Plug/freshwater	1.70	Heddon Devil Diver	Plug/freshwater	3.70
Reidy's Big Barra Lure	Minnow/tropical	1.85	Flopy rubber — 18g	Plug/freshwater	3.75
Helin Flatfish F7	Plug/trout	1.85	Rebel Double Deep Wee R	Plug/freshwater	3.85
Killalure Barra Bait 4"	Minnow/tropical	2.05	Bagley DBIII	Plug/freshwater	3.85
Flick's Lure — small	Minnow/tropical	2.30	Arbogast Arby ⅜oz	Plug/freshwater	3.90
ABU Killer 18g	Minnow/tropical	2.30	Rapala Fat Rap large	Plug/freshwater	3.95
Heddon Tiny Tad 7g	Plug/freshwater	2.35	Kent Barely Legal	Plug/freshwater	4.05
Kent Frog	Plug/freshwater	2.40	Cordell Deep O	Plug/freshwater	4.10
Celta #5	Spinner/freshwater	2.40	Arbogast Mudbug ⅝oz	Plug/freshwater	4.10
Nilsmaster Spearhead	Minnow/tropical	2.40	Bellbrook Deep Diver	Plug/freshwater	4.15
Kent Natural Bass	Plug/freshwater	2.45	Tri-Angle Down Boy	Plug/freshwater	4.20
Nilsmaster Bidgee	Plug/freshwater	2.50	Bomber Model A	Plug/freshwater	4.30
Bennett/McGrath diver	Minnow/everything	2.60	Storm Hot 'n Tot — large	Plug/freshwater	4.40
Aeroplane Spinner — small —	Spinner/freshwater	2.70	Storm Magnum	Plus/freshwater	4.40
Killalure Deep Diver 4"	Minnow/tropical	2.70	Wiggle Wart		
Nilsmaster Invincible 7"	Minnow/tropical	2.70	Aeroplane Spinner — large	Spinner/Murray cod	
Luhr Jensen Hot Shot	Plug/freshwater	2.85	Rapala CD-11	Minnow/tropical	4.60
Wigglä — small	Plug/freshwater	2.85	Angler's Pride Chowhound	Plug/freshwater	4.70
Flopy plastic — 7g	Plug/freshwater	2.90	Ashley Probe	Plug/freshwater	4.85
Halco Combat	Plug/freshwater	2.90	Poe's Super Deep Diver	Plug/freshwater	5.05
Arbogast Mudbug — ⅜oz	Plug/freshwater	2.90	Angler Pride TD20	Plug/freshwater	5.25
Lively Lures Assassin 7	Minnow/tropical	2.90			

down. The great strength of these lures is in casting — and jigging for redfin — where their weight sinks them to a good depth for the beginning of the retrieve. But on the troll, water pressure pushes them. Without additional weight, these lures will not troll very deeply, regardless of how much line you let out or how light that line is.

To get that in perspective, consider the 0.95 metres we achieved with a Tassie Devil — perhaps Australia's most used, though not necessarily the best, trout lure. By halving line size down to 2kg and still trolling it on a measured 20 metre length, we got it down to 1.00 metres flat!

The influence of added weight can be gauged on results on a #2 Celta. This went down 1.05 metres in the main test. Hung behind cowbells that were dragged on the standard 4 kilo line at 20 metres and then 30 metres, it went down a fairly disappointing 1.3 metres and 1.7 metres, respective. More depth was achieved by trolling it (after being added to a leader) on the similar lengths of lead core line. This got it down to 3.10 metres and 3.25 metres. The deepest we could manage was in conjunction with

a "Javelin" trolling sinker, which took it (on 20 metres of 4 kilo) down to 3.40 metres.

Small bibbed lures like the superlative Bennett/McGrath diver and small Fat Rap do not go much deeper if you let out more line. They work at a comfortable depth with about 15 metres of line out. Extra line makes the troller feel more comfortable rather than achieve significantly more depth. It also reduced direct contact and may result in less hookups.

A drop in line size makes a considerable difference in the depth capabilities of bibbed floating/diving lures. The Bennett/McGrath diver went from 2.60 metres under standard test conditions, down to 3.45 metres on 20 metres of 2 kilo line, which further increased to 3.80 metres when the 2 kilo line was extended out to 30 metres. A 20 metres length (plus leader) of lead core took it to 4.50 metres. The increased drag of cowbells at 20 metres brought it back up to 1.80 metres, while the addition of the trolling sinker to the standard test rig dropped it right down to 5.30 metres.

There is a reduction in feel and the fish's fight is

slightly sandbagged by the addition of these depth aids. But that's what is needed in trout lakes to get them down where they can do some real damage. The implications for downriggers — the best system of all — should be obvious.

The drag created by water tension on the line causes considerable variation in running depths when trolling bibbed lures, particularly those from medium size up. A lure can be made to run shallower by holding the rod tip high — a smart move when the possibility of the lure hanging up arises. More depth can be gained by actually poking the rod into the water during a retrieve. The big-bibbers dived significantly faster and deeper with more line out and with lighter line. But as they got beyond 30 metre mark, they began to level out. This is fishing's J-curve coming into play, where the drag in the line begins to equal the downward force of the bib. The lure is unable to go deeper. More line rides it closer to the surface.

## **CONCLUSIONS**

The magnum Hellbender, a long time favourite of ours, proved — as suspected — it's still the one to beat. It was a little unfortunate that a mega Gudebrod Bump 'n Grind that may well have given the Hellbender a run, wouldn't swim despite arduous tinkering.

With the Hellbender clan now absorbed into the Rebel/Cordell/Heddon conglomerate and Mann's issuing a 30 foot-plus deep diver (which seems true to name but arrived too late to be included in the survey) the issue as to what is deepest hangs in a

state of flux.

We might ponder whether a lure capable of diving that deep is really necessary. Are we merely getting caught up in some American treadmill that's not relevant to our waters, or our fish? The answer to that, of course, is an unequivocal yes. But with the future of freshwater fishing in the eastern states firmly locked into big impoundments, more and more anglers are finding themselves facing the big waters scenario, where a gap still remains for 30 foot capable lures.

Besides that kind of absolute depth capability, such lures — and their 20 foot capable contemporaries — tend to possess a better crash dive capability. This makes a superior casting lure on both river and lake. And because they run deep with little line out, they're the ones to use on those weaving trolling runs through tight water; the places which produce the strikes.

Depths of the same magnitude are claimed by some Australian makers and on the drawing boards of others who are now well and truly flexing their muscles. The war is far from over.

We would like to express our appreciation to Peter O'Donoghue of Modpod Pty Ltd for making available a Lowrance sounder for the survey, Mossop's Tackle, Brisbane, Peter Newell, Tom Nairne of Maverick Tackle and Dwayne Pfenninger of Mann's Bait Co, Alabama for supplying lures.

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