

## **The Marlin Bite, Scumlines, and the East Australian Current**

by Rick O'Ferrall - after discussions with Rob Lang

The EAC is a big part of our marlin fishery, and love it or hate it, there wouldn't be a billfish bite without it.

Rob Lang from Coffs Coast Sportfishing has an interesting theory to account for the on again/off nature of marlin fishing - in this case in the unique environment of the Coffs Coast.

To preface Rob's thoughts, I should note that unlike most other game fishing centres in Australia, the northern NSW coast off Coffs Harbour is where the continental shelf is closer to the coast - at only 13 nautical miles from shore - than almost anywhere else in the country. Given that the East Australian Current usually runs down the edge of the continental shelf, this means that our game fishing here is even more strongly influenced by the vagaries of the EAC in all its moods, and that moreso than most game fishing centres, we ignore the dynamics and moods of the current at our peril...

Anglers here have always known that the marlin fishing is irrevocably linked to the behaviour of the EAC, most specifically the proximity to the edge of the shelf of its core and its speed fluctuations. The marlin use the current to travel southwards down the edge of the continental shelf as they move along traditional feeding migration paths.

In essence, Rob looks deeper at this dynamic, and believes that when the current is raging along at 3+ knots, the marlin simply don't bother to step off the train, instead staying on board until the next stop. And the next stop seems to be when and where the current slows down. Once the current drops below 2.0 knots or thereabouts, the marlin move out of the current to the local undersea structures and bait aggregation areas and start feeding. When they first arrive this way, they're in a voracious mood, very hungry, and bite very aggressively. There's no dithering, no picky behaviour, and no checking out of all the lures... just a solid hit usually followed by a good hookup, and then it's game on.

We have to remember that these marlin are always just visiting, and that we have no permanent local population here on the Solitary Islands coast. So once they've had a bit of a feed for a few days, and/or the current speeds up again, they lose interest and instinctively move on, using the current, to greener pastures where the bait hasn't been scared to death and dispersed by heavy pelagic activity. And in doing so, they're simply following a migration and feeding pattern imprinted in their DNA over the millennia.

Rob feels that the first meaningful sign of a slowing current, and with it the impending arrival of another hungry flush of marlin, is the appearance of the dead algae scumlines associated with the current lines. He thinks that the algae concentrations are held down below the surface by the strong current phases and the thermocline, and it's only when the current slows and the vertical delineation in the water column breaks down enough to allow the algal detritus to drift up to the surface that we see those scumlines.

Remember that while there are some extremely deep-running macro currents moving around and between the oceans of the world, most of the currents that are of interest to fishermen are the better known surface running currents like the EAC, and these currents usually run to a depth no greater than 200 metres. And while they run at an average speed over time of, say for argument's sake 2½ knots, their actual speed varies from place to place and day to day depending on the myriad forces that drive them, such a Coriolis, wind, temperature and so forth. So Rob's theory goes that when they run strongly, they push algal detritus down below the current flow and hold it there, and when they slacken off, the algal muck can then float upwards to the surface, and give observers the first and most obvious sign that the current has throttled back... and the marlin will soon be arriving. It certainly makes sense.



*A very pronounced line of dead algal detritus forming the familiar "scumline" off Coffs - note the big colour change from blue to green from one side to the other*

As noted above, the second part of the theory holds that while it takes current flow to bring marlin down the coast, the marlin simply won't bother to get out of the current until it drops below a certain speed. This should be borne out by the anecdotal evidence if you keep detailed enough logbooks.

If correct, this means that we can't expect any consistently good fishing here when the current is raging, or when it fails completely, or when it's diverted way out to sea by the big oceanic eddies that have been disrupting the current here for extended periods in spring and early summer for the last few years.

The dichotomy is therefore that we can't expect marlin without the current, but we also can't expect marlin to stop off when the current rages along at 4 knots, and can therefore only anticipate a decent bite away from the current during the slower phase of each current cycle. That's not to say that there won't be any bite at all during periods of strong current flow, because there are still going to be marlin travelling along in it. But to find them, you've got to be fishing in the current and more or less drive over a marlin that's riding along in it. This is by no means impossible, as blue marlin are occasionally caught by boats driving over isolated fish as they traverse through the main body of the flow here all the time. But it's a slow bite, and a long day more or less fishing blindfolded.

The duration of an EAC speed cycle where the current speeds up to 4+ knots and then slows back down to something under 2 knots isn't really well known, but a guess would put one cycle from slow to fast back to slow again at about two weeks. You'd have to research satellite records to determine if there's any regularity or pattern to EAC speed cycling, but if the theory's correct, every time the current backs off out there, the scumlines will appear, and the bite should first go hot, then die off again a few days or a couple of weeks later as the fish move away and/or the current picks up speed again.

So in the perfect world, it sure would be nice if this EAC speed cycling in summer happened every week or so... with the slow phase on weekends... during a dark moon... when you had crew... when the bait was everywhere... when the wind was below 10 knots... etc... Yes, I know, dream on.

So to summarise...the Lang theory suggests that the appearance of all the algal scum is a reliable sign that the current is in a weakening cycle, and if this theory holds, the next thing to happen in a neighbourhood near you within hours should be a fresh flush of hungry marlin exiting the EAC and looking for action.

All you have to do is see the scumlines heralding the weakening current, then find where these fish have jumped off the EAC and where they're feeding. Experience has shown won't always be the same area. During the 2015 summer blue marlin season, the blue marlin arrived in decent numbers in mid March, whereupon most of them concentrated north of the canyons, up around the hard ground stretch of the continental shelf dropoff. In other years, it's been the Sawtell Canyons section of the shelf edge, and others, down south past the Nambucca Canyons.

It's not necessarily in the same place, and you'd have to be clairvoyant or lucky, or out there every day to find where it's going off next.

