

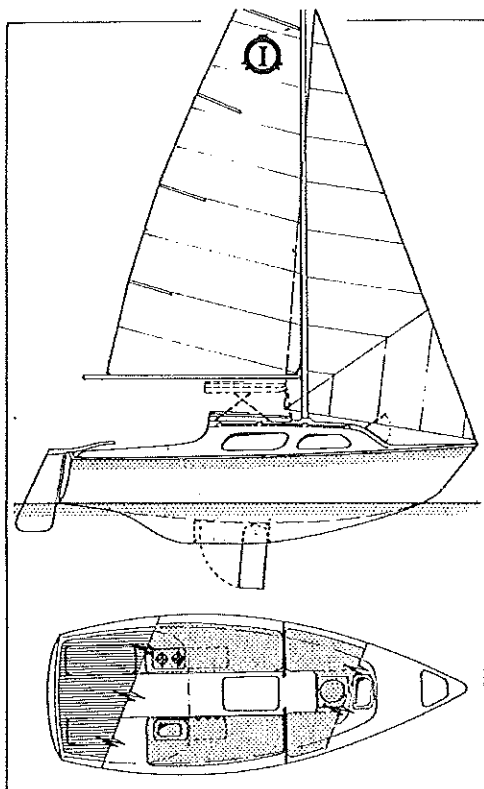
## Investigator 563 – Statistics and Review

The Investigator is a small (5.63m LOA) stable fibreglass trailerable yacht produced in Australia in the late 1970s-early 1980s. Approximately 170 were produced, the last in 1989.

Kevin Shepherd designed the Investigator and won awards for Good Design.- With a ballasted shoal draft keel, the Investigator combines the safety of a keelboat with the convenience of a trailer-sailer. Most have a single axle tilt trailer which allows easy launching without submerging the trailer. The cabin features 4 full size bunks and is free of centreboard intrusion. Other features include an anchor well, sliding hatch, and cabin pop-top. Typical all up weight of boat and trailer is less than 1200 kg, so the rig can be towed by medium to large family cars.

Prices (2006) range from \$5,000 to \$10,000 depending on condition.

LOA	18'6" (5.63m)
LWL	16'4"
Beam	6'11" (2.1 m)
Draft	1'9" (0.54 m) (board up)
Draft	3'9" (1.15 m) (down)
Displacement	1650lb 750 kg Nominal
Ballast	763lb 345 kg
Working sail	178sqft



### Review (Circa 1977, Courtesy Jeff Toghill)

There have always been two major hangups in the trailer-sailer concept. One is the lack of ballast keel to prevent the boat from turning over. The second is the intrusion of the centreboard casing into what is already a fairly small cabin. Not unnaturally, innovations of all kinds have appeared from time to time, in an attempt to get over either or both of these problems. The stubby keel - such as fitted to the Redjacket - was just such an attempt, but while this overcome the two problems it created another in making trailering difficult. And after all, if one has difficulty in trailering a trailer-sailer ... Another attempt to overcome the problems was with bilge keels but this fell down because the performance of the

boat deteriorated to a degree that again created new problems as bad as those that were solved. So if the stubby keel and the bilge keel were not the answer it began to look as though the problem was insoluble.

This was the atmosphere in which well known Sydney Designer Kevin Shepherd sat down to design his first trailer-sailer. Convinced that the centreboard casing and risk of capsize had to be eliminated, and knowing that stubby and bilge keels had not provided the answer, he had to open his mind to a completely new concept in looking for an answer. In fact, he found it not in modern, up to date, tank-tested design, but in the yachts of yesteryear. The boats that are now outclassed and often outraced by streamlined modern design, but which can still hold their own against the best in terms of safety, seaworthiness and stability.

Long before adopting the fin keel, which pivots a boat about within her own length, the older yachts were universally fitted with long keels. These had tremendous advantages in keeping the boat steady in a following sea and making her stable and seaworthy. Their only disadvantage was in slowing the speed of her coming about. But by being heavily ballasted, they made the yacht stiff and stable, and because the weight was spread along the length of the long keel, and did not jut far downwards beneath the hull, they were of relatively shallow draft. Here Shepherd found one answer - a ballasted keel which would keep the boat upright, yet which was shallow so that she could be trailered.

But such a shallow draft was not sufficient to give the boat windward performance so a centreboard was still necessary. And a centreboard meant the room-consuming casing which chopped the small cabins of trailer-sailers literally in half. The answer to this problem he found in American yachts. The off-shore racing rules in that country permit a boat to increase her draft, and thus windward performance, by lowering a centreboard plate through the fixed keel. Shepherd applied this principle to his long ballast keel, found that the centre-board would fit inside the fixed keel without intruding into the cabin, and there it was - a new concept in trailer-sailers which he named the "Investigator".

To see just how good the designer's ideas were, and whether or not the new concept worked, I took the Investigator Mk 1 for a run down Balmoral Bay and out to Sydney Heads on a shake-down run. The weather was ideal for such a test, ranging from very light breezes (for many boats that perform well in moderate or fresh winds, perform badly in light airs), to gusty Westerly squalls that gave us a chance to really get the feel of this new boat.

But to take things in their right perspective. Firstly, the appearance of this latest addition to the trailer-sailer fleet. She is, as indeed are all Kevin Shepherd's designs, pretty. But pretty! You can have your fancy high performance boats that may outstrip everything in speed, but, look like distorted matchboxes. Most people like a boat to look like a boat. Shepherd has already indicated his preference in this field as designer of the prettiest medium-sized yacht afloat -

the Marauder 725. He has carried the same concept into the Investigator, and she is a pretty boat along classic lines.

The hull is standard round bilge with little tumblehome and a fair rake at the stem. The entry is fine and clean, and indeed this boat's hull carries much of the Marauder's lines forward, only the broadening of the trailer-sailer transom getting away from the 725 style. The cabin line, too, follows this trend being fairly standard with large windows making the interior light and airy and a wide pop-top hatch which allows good headroom in the hatch-way.

The underwater profile, however, is quite different. Far from standard, the long keel slopes back at a low angle from the forefoot, if, indeed there is a forefoot, for the angle between stem and keel is almost negligible. This permits easy trailering in that the boat literally rolls herself onto the trailer, there being only an insignificant step between the flat of the keel and the rake of the bow. It is in this long sloping area that the 800 lbs of ballast is situated, and through its centre the centreboard plate drops down. Undoubtedly, this is a first class piece of design work incorporating as it does, features of positive righting stability, trailerability, and the recessed centreplate. A number of other interesting design features are to be found in this boat. The transom-hung rudder can be unshipped, reversed and re-shipped to provide a rear crutch for the mast when the boat is on the trailer.

The forward hatch is formed by the opening front window of the cabin a la motor boat style, a good innovation as it gives good light, forward visibility from down below, and through ventilation, a feature many larger boats could copy. The outboard is fitted under the cockpit seat on the port side and is simply pivoted down through a hatch in the hull, so that it never has to be lifted, merely swung up and down. *(Later (most) versions have the outboard on a bracket on the stern, and the port locker for stowage.)*

The moulding of the Investigator is solid. The decks and cabin top have a firm feel when you walk on them, and there is none of the "twanginess" often associated with boats of this size moulded in glass fibre. Except, that is, on the pop-top which is a bit on the light side. However, this would not need to be too heavy, as a common factor among pop-tops on some craft is the hernia that comes with raising it. Non-skid surface handrails and all the usual trimmings come with this boat which is well fitted and rigged. Single lowers and uppers form the shroud rig, with 7/8 forestay and tensionable backstay offering a certain amount of flexibility to the mast. *(Later versions have a diamond stay bracing of the mast, and single wire shrouds.)* The test boat was fitted with safety rails which, of course, are not standard but which, surprisingly, did not interfere with the operation of the boat as they frequently do on small craft.

Down below the lack of centreboard casing makes this a very big little family boat. The four berths make for easy family accommodation, with the two forward -

bunks concealing a central toilet, either pump-out or suitcase variety. The bunks also house the built-in buoyancy which totals 24 cu.ft in the form of sealed air tanks. Galley and sink are provided for in a slide-out arrangement under the cockpit which means they can be stowed out of the way when sailing is in progress. Inside, this little boat is extremely roomy, light and airy. Apart, as mentioned, from the lack of centreboard casing, which gives her big boat appearance, a unique "oriental" styled bulkhead between the main saloon and forward cabin provides the strength and separation needed at this point without cutting the boat up into small sections.

Together with the forward window, these features enable one to view right through the boat and out onto the foredeck, giving a tremendous feeling of spaciousness. The hatch/window is well secured and sealed to ensure watertightness. A main and jib totalling 17 square metres comprises the rig with the halyards running back to the cockpit so that all sailing operations from hoisting onwards can be carried out from the cockpit position. I found the sail area quite sufficient to move her along nicely in the light stuff, and not over-canvas her in the squalls. But for heavy weather, the boat is fitted with roller reefing so that sail can be taken in quite easily. Winches are not fitted and are not necessary, and the mainsheet track is mounted right aft out of the way of passengers and crew. *(Most versions have jib sheeting on the cabin top. A 2:1 pulley system with two pulleys on the jib sheet clew attachment provides the mechanical advantage)*

Hard on the wind the Investigator sailed well and pointed up beautifully, although on the test boat the close sheeted jib (on the cabin top) seemed to be back-winding the main, and I would suggest the sheeting points could be eased out to a slightly less acute angle. She responded quickly to main sheet pressure which is necessary in small boats to ensure that they are kept sailing at their best, even through squally conditions such as we encountered. She had only slight tendency towards weather helm, even in the hard squalls, and try as we might, there was no way we could put her gunwale under, so she is not tender and the 50% ballast ratio (the norm for deep-keel yachts) worked well.

Eased off, this little boat really flew through the water. At no time did she give us a moment's worry, handling responsively and riding with good stability through the squalls. I would like to see the tiller hinged as it tended to catch the knees a little when going hard about, and my suggestion to this effect was taken by the builder who intends making this adjustment in future models. Otherwise on or off the wind, she showed no undue tendencies and, as I say, handled like a charm. Dead down-wind is where the long keel showed up and she sailed a line as straight as a die. There was no boom-vang fitted to the test boat but again, this is to be rectified in future versions.

The centreplate has little or no weight in it, and there is no need for the hydraulic or mechanical lifting gear usually associated with boats of this type. A simple light

line near the cabin entrance is all that is required to lift the plate and a cam cleat holds it in position. By juggling a little with the centreboard, the performance of the boat can be improved, and this is something that will delight the heart of owners previously used to centreboard dinghies.

Owning and racing one of the Shepherd's Marauder 725's, I was particularly keen to try this little boat, and despite the fact that she has some radical design features, she nevertheless showed Shepherd's touch in her fast sailing and easy handling ability. As a family trailer-sailer she is first class, and that from one who is not over keen on trailer-sailers in general. But this little boat has had a tremendous amount of thought put into her design, and it has all paid off. She is pretty - a delight to the eye - roomy, and a pleasure to handle. Add to that first rate performance, and you must come up with the answer that the Investigator is an ideal little boat for both beginner and enthusiast alike.