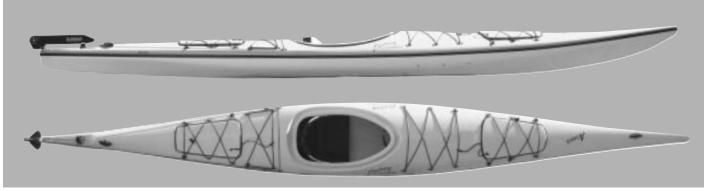
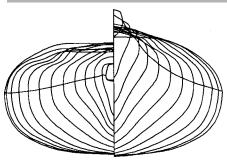


# Discover Kayaks' Aurora by Seaward Kayaks





Length overall	17'6 <sup>5</sup> /8"
Beam	241/2"
Volume	16.7 cu. ft.
Cockpit size	15 <sup>3</sup> / <sub>8</sub> " x 30'
Coaming height	
Forward	133/8"
Aft	103/4"
Height of seat	3/4"
Weight	54½ lbs.
Center of buoyancy*	47%

\*With 250-lb. load

### Speed vs. Resistance

These figures are derived from mathematical models based on a limited number of towing tests on flat water.

Kayak weight + 250-pound payload Resistance in pounds, shown to hundredths to differentiate figures formerly rounded to tenths. A fit paddler can maintain a cruising speed at 3 pounds of drag. Only a few can work against 5 pounds of drag for long distances. See *SK*, August '98 page 43 for more details.

Calculated by the KAPER program by John Winters (Factor added for soft plastic hulls when applicable):

2 knots	0.94
3 knots	1.97
4 knots	3.70
4.5 knots	5.54
5 knots	8.45
6 knots	14 94

Calculated by Matt Broze using Taylor Standard Series:

2 knots	0.94
3 knots	1.98
4 knots	3.73
4.5 knots	5.31
5 knots	8.34
6 knots	15.39

#### **Hydrostatics**

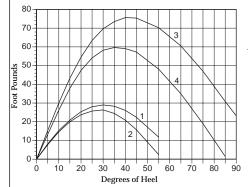
Paddler weight Cargo weight*	150 lbs. none	200 lbs. none	150 lbs. 100 lbs.	200 lbs. 100 lbs.
Waterline length	14' 5.7"	14' 9.7"	15' 0.9"	15' 3.8"
Waterline beam	23.1"	23.7"	24.1"	24.4"
Draft	4.0"	4.5"	5.1"	5.7"
Prismatic coefficient	0.49	0.50	0.50	0.50
Block coefficient	0.35	0.36	0.37	0.38
Wetted surface in sq. ft.	18.45	20.27	21.91	23.43
Lbs./inch immersion	84.2	89.9	94.3	97.7

\* Fixed "paddler" weight has its center of gravity located 10" above the lowest part of the seat and 10" forward

of the seat at back. The "cargo's" center of gravity coincides with the kayak's approximated center of gravity.

Calculated by Nautilus System™ computer program

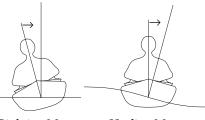
# Righting/Heeling Moments (Fixed-weight)



#### **Stability Curves**

- 1. 150 lb. paddler, no cargo
- 2. 200 lb. paddler, no cargo
- 3. 150 lb. paddler, 100 lb. cargo
- 4. 200 lb. paddler, 100 lb. cargo

Calculated by Nautilus System™ computer program



Righting Moment Heeling Moment

The same force that rights a kayak on flat water contributes to its rolling motion on the face of a wave.

#### **Reading the Stability Curves**

The steeper the slope of the curve as it rises from  $0^{\circ}$ , the higher the initial stability. Beyond the maximum righting moment at the peak of the curve, the kayak enters an unstable region of decreasing stability that does little to slow the rolling of the kayak to the point of imminent capsize.

Note: Raising the center of gravity slightly will decrease the stability of a kayak, while lowering it will increase it.

#### **Aurora Design Statement**

The Aurora is the first model in the Discover Kayaks series. By clearly distinguishing this new series, paddlers can easily compare the many differences between Seaward Kayaks, the Discover Kayaks series and the features of other touring kayak manufacturers. The Aurora is handcrafted with the same care and attention as all Seaward models with a lower price tag

(being ideal for paddlers who are on a limited budget, but still want to get themselves into a composite kayak). The Discover Kayaks series is assembled in less time (creating \$ savings) and offers some of the extras that the original Seaward Kayaks line does as options.

The Aurora's performance addresses all skill levels, and loaded or empty this kayak retains a great balance of initial and secondary stability. The large cockpit opening combined with a 14" deck height will accommodate paddlers of many sizes. While day tripping or on a longer tour the Aurora will track well and is easy to edge and maneuver. Ultimately, we've just made composite touring kayaks that are much more accessible for all paddlers.

Seaward & Discover Kayaks Design Team

#### **Aurora Review**

#### **Reviewers:**

GL: 5'11", 165-pound male. Day paddles in 12-knot winds, 1-foot wind waves. DL: 5'10", 195-pound male. Light winds, confused reflected waves and heavy chop. Surf landings in 3- to 4-foot breaking

**TE:** 6'1", 200-pound male. Day paddling in light wind, smooth seas.

The Aurora has a "nice profile" (GL) and "its general appearance was excellent. All bulkheads and deck lines were neatly installed" (DL). The Kevlar laminate is "very smooth" (TE) but the broad arch of the hull's midsection "oil cans if you push on it" (GL). The hull-to-deck seam is a plastic extrusion backed up by fiberglass on the inside.

"For a solo carry the coaming rests easily on the shoulders, is well-balanced" (GL). The Aurora's "weight is not objectionable—I could lift the kayak onto a tall vehicle with no problems. The carrying toggles were in good positions for two-person carries, but be wary of the rudder when carrying the rear section" (DL).

The cockpit opening is large to make getting in and out of the kayak easy. It was long enough for GL but not for TE to get into seat first, then feet. The height of the foredeck provides "plenty of foot room. The foredeck has a high arch but not so high that it interferes with paddling" (TE).

The deck lines are secured with plastic padeyes and include bungies for charts forward and a paddle-float outrigger aft. There are no bungies for a spare paddle nor perimeter grab lines.

The seat, a fabric-covered foam pad that doubles as a paddle float, is comfortable, though TE would have liked more support underthethighs. The combination of a curved plastic support and padding made the back band "quite comfortable and gave excellent support, but, along with the high rear deck, precludes layback rolls and braces" (GL). Thigh bracing is provided by sheets of foam glued to the underside of the deck. "The recess of the coaming makes for a good contour to hold the thighs for bracing and rolling" (TE). GL found that the thigh braces "allowed good control, but contact is mostly

with my knees, not my thighs."

"Excellent foot braces. They give solid support, and they rotate to control the rudder. The best of both worlds" (GL). The rudder deployment line runs in a loop around the perimeter of the aft deck. It is easy to find the right one to pull, but it is an "awkward reach aft to operate it" (TE). TE had no trouble getting the rudder to retract into the V-block on the stern, but DL found the notch too small to hit with the rudder.

Both GL and TE rated the Aurora's initial stability as excellent and its secondary stability very good. "Initial stability is ideal for beginners, fishing and photography, and the secondary stability can hold the boat at high degrees of heel" (TE).

Even with the rudder retracted, the "tracking is very good: it stays on line without yaw" (GL). Set on edge, "the boat carves a turn nicely" (DL) and has "good response to lean and sweep strokes in calm conditions as well as in a moderate chop" (GL). For TE, the heaviest of the reviewers, the kayak "responded to edging with average turning ability. It would turn during the sweep but would not carry the momentum of the turn. With extreme edging the kayak would spin to make a quick turn."

The rudder, when deployed, worked well to help maintain course in wind and waves, though GL "never felt the need for the rudder either to maintain a course in the wind: almost neutral balance. Turns upwind and down with moderate effort in wind." DL also noted that the weathercocking was "minimal."

For GL, the Aurora had "moderate speed and good acceleration. [He could] maintain a good cruising speed with moderate effort." TE could hold "a good cruising pace around 4 knots without much effort. Not a high sprint speed, but fast enough to catch rides on waves." DL agreed the Aurora was not noteworthy for its speed but "keeping out in front of the other paddlers in my group proved not to be too difficult."

The bow "deflects waves well, and tended to ride up and over them for a dry ride" (GL). DL agreed that the "high foredeck shed water well but the front hatch and deck lines tended to flip water and spray upward and into my face."

DL "did a few surf landings. Control on the waves seemed to be adequate with the use of paddle strokes alone. The bow did bury slightly in the surf but I found this not to be a problem. The boat also performed well punching out beyond the surf zone."

The Aurora is "easy to roll—just a little slow coming around. Great support at the feet. Thigh brace support is solid. The rear deck is too high for layback rolls and braces. A reentry and roll was not difficult. [After a wet exit] you need to hold on to the coaming: there are no grab lines. A paddle float reentry worked well" (GL).

For cruising, the Aurora has "excellent, deep stowage volume, [enough for] week-long, or longer, trips" (GL).

"The hatches allowed easy access to the aft and forward compartments, but did not remain watertight in surf conditions or when I rolled the boat. I recommend using float bags for backup flotation" (DL). GL and TE noted only a few tablespoons of leakage in either compartment. The foam bulkheads are sealed with adhesive caulk and are watertight.

With a cruising load aboard DL thought the Aurora "felt extremely stable and the tracking was excellent. The boat still turned well without the rudder but it took a lot more force to edge it." GL, carrying 65 pounds aboard, observed the Aurora had "no weathercocking, and tracking was superb."

DL thought "the Aurora suits beginner level kayaking and touring well. With its high foredeck, it is better suited for large paddlers." Citing concerns about the hatch seals and the flexing of the hull, DL thought paddlers using the Aurora should avoid open ocean paddling, breaking surf, or hard landings on rocky beaches. TE wrote that the Aurora "has the stability and cargo capacity to make a good choice for an entry-level to intermediate kayaker's boat for enjoying a wide range of kayaking activities from fishing and photography to vacation cruises." GL thought the Aurora is a "good cruising kayak for the beginner on up. Tall paddlers will appreciate the legroom, and folks interested in fishing or photography will welcome the stable design and the large cockpit volume for gear."

## Aurora Design Response

The Seaward Kayaks design team thanks Sea Kayaker and each of the reviewers who have undertaken a complete review of the new Aurora. We are pleased to hear the test paddlers determined that the Aurora has superb tracking, minimal weathercocking, excellent initial stability and a very good secondary stability, as this kayak was designed for the beginner on up. The Kevlar Aurora model reviewed has had some features upgraded for 2002. Flush deck fittings and fiberglass bulkheads will add func-

tionality and rigidity to the kayak especially in the large surface areas where any Kevlar (a more flexible material) may have seemed to oilcan. The hatch seal has also been improved after the addition of a more defined rim around the hatch opening to hold the gasket on the hatch cover in the sealed position. The solid bulkheads and changes to the hatch opening will guarantee maintenance-free seals to each compartment as well as create extra stiffness to the boat.

The Discover Kayaks series was introduced to be easy on the bank account without sacrificing safety or quality. Each

of the boats in this series is handcrafted and comes standard with safety features such as the comfortable paddlefloat seat bottom and rudder. We believe the Aurora is ideally suited to fit medium to large paddlers, but is also accommodating to smaller paddlers who choose to outfit the cockpit with padding. The Seaward & Discover Kayaks design team will continue to produce kayaks of extraordinary value. We again thank *Sea Kayaker* and the test paddlers for their praise and constructive Aurora review.

Seaward & Discover Kayaks Design Team

#### **Options and Pricing**

Designed: 2000

Standard Lay-up: Fiberglass with four color choices: red, yellow, teal (green) and white

Standard Features: Rudder, flush hatch covers, paddle float seat bottom, recessed deck rigging, fiberglass bulkheads

Options: Solid brace pivoting foot pedals, compass, custom colors

**Approximate Weight:** 59 lbs in fiberglass, 52 in Kevlar **Price:** US \$1865 in fiberglass, US \$2455 in Kevlar

Availability: Check www.SeawardKayaks.com for dealer and outfitter contacts

Manufacturer's Address: Seaward Kayaks, P.O. Box 2026, 610 Oyster Bay Road, Ladysmith, BC, Canada, V9G 1B5. Phone: (800) 595-

9755, (250) 245-2242. E-mail: Seaward@SeawardKayaks.com, web site: www.SeawardKayaks.com

