



Knives Sharper than Sharp

Local
CREATORS'
Market

Seki Knives, Gifu

This knife will change every assumption you have about the best way to cut cakes and other confections perfectly. Once you've tried it, we think you'll be hooked.

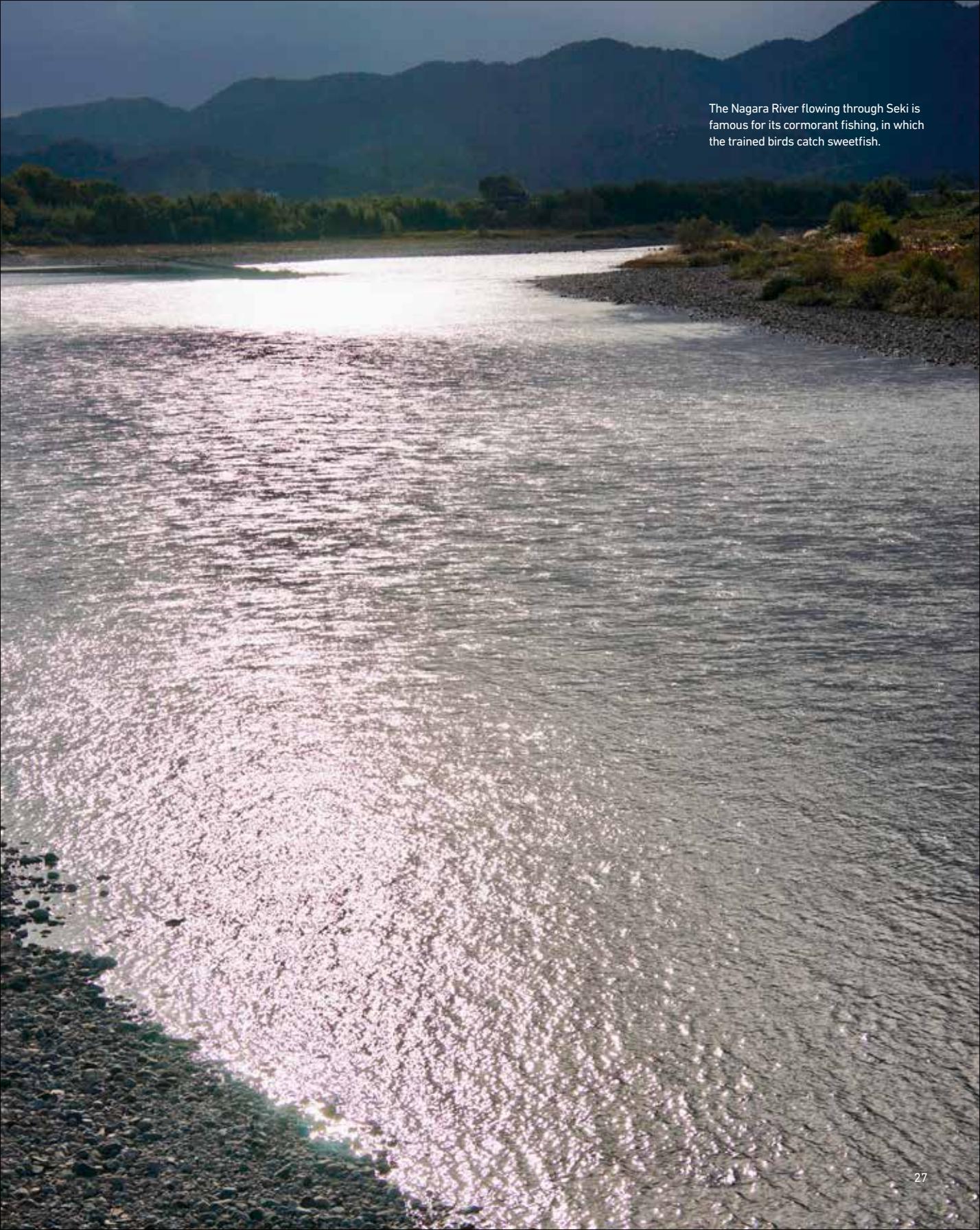
Opposite page: The elegant curve of a Seki cake knife cuts cleanly through the structure of even the most elaborate and delicate confections.

Right: The cake and bread knives of the Nagomi series.



After tempering, blades are cooled at room temperature. Each one is rigorously inspected.





The Nagara River flowing through Seki is famous for its cormorant fishing, in which the trained birds catch sweetfish.



The ultimate wedding-cake knife

You sink the unusually curved serrated knife down into a cake gently, moving through with a slight sawing motion. Then, with a flick of the wrist, you draw the tip back across the bottom of the cake in one smooth motion. Before you now is a cleanly cut cake with every bit of its decorative cream perfectly in place.

This wonder tool is the work of a knife maker in Seki, Gifu prefecture, where swords have been forged since the late Kamakura period (1185–1333). By the height of the Muromachi period (1336–1573) there were more than 300 competing swordsmiths, and while the products have changed, Seki remains one of the world's leading manufacturing centers of quality blades. Today there are roughly 400 knife makers concentrated in the city.

The cake knife described above is one of a series offered by Mitsuboshi Cutlery under the brand name Nagomi. The high-quality line offers eight designs, including a bread knife and several general-purpose knives—all handcrafted through five different processes carried out by five different companies.

The material used is 440A stainless steel, flouting the industry trend toward high-carbon blades. Though favored for their hardness, high-carbon knives are brittle and difficult to sharpen. In contrast, high-chrome Nagomi blades are neither too hard nor too soft.

The 440A grade is an excellent material for producing, in the final step of the edging process, just the right *bari*, or burr, on the blade. This is a minute fold of metal formed on the opposite side of the knife edge when it is ground. Theoretically the burr should be eliminated when the knife is sharpened, but leaving a trace of it actually makes the knife cut better and helps it stay sharp longer.

Takahisa Watanabe, president of Mitsuboshi Cutlery, says 440A steel was first recommended to him by a Seki knife polisher who lauded its ability to “hold a good burr.” Although the burr is so minute you need a microscope to see it, a seasoned polisher can tell it is there just by the feel. Too much burr leaves a saw-like edge that will not cut well. A slight trace is just right, especially for knives that are likely to be sharpened in the home rather than in a professional kitchen.

To ensure a sharper edge, Nagomi knives are purposely made from a harder steel, with Rockwell ratings of 57 or 58, rather than the usual maximum of 56. As the blades are stamped out of sheet metal rather than being forged, there is no fear of their cracking.



Top: Kasuga Shrine, home to the guardian of the Seki smithies.

Middle: Suda is a traditional Japanese restaurant nestled in the hills. Its chefs use Nagomi knives to prepare exquisite kaiseki cuisine.

Bottom: The all-purpose Nagomi *santoku* knife, photographed at Suda.

Opposite page: A Nagomi bread knife with its finely engineered serrated edge. It renders a smooth cut like no other knife can.

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Before tempering, several blades are bound together in layers so that they will not warp in the heat. From here they will pass through a 12-meter furnace.

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After the body of the knife has been ground and polished, the final task of edging determines blade sharpness and feel. Each edge is expertly ground by a skilled craftsman.

An all-star team of craftsmen

The Nagomi line, fashioned by a diverse team of highly skilled craftsmen who each bring their specialties and ideas to bear in a multistep process, is the natural result of Seki's traditional divisions of labor.

Take, for example, the knife handle, which is typically rectangular and straight. Nagomi handles, crafted by Yamashin Seisakusho using hygienic, water-resistant laminate wood, are softly curved (7). Into this fluid form Yamashin workers expertly cut the groove that will hold the tang (shank) of the blade. Next up are workers at Osamura Metals, who press blades with tangs precisely shaped to match the curvature of the handles (1). The blades are secured to the handles with rivets, and the whole worked and polished until the rivets are invisible (8).

The nascent knives next head to Fujita Heat Treatment, where they undergo quenching and tempering processes (2, 3, 4) at stringently controlled temperatures to achieve the desired hardness to a tolerance of +/- 0.5 on the Rockwell scale. Warping is assessed visually and corrected by hand (5). Next, the knives are sent to Hirata Jiken, where the bodies are ground and polished—also by hand—to the specified thickness within a margin of 0.2 or 0.3 millimeters (6). Finally, the knives are sent to Mitsuboshi, where their edges are ground as appropriate for their intended use (9).

When Mitsuboshi set out to make a new bread knife, they procured as many different types from around the world as they could and tried them out on loaves of bread both soft and hard. Employees tested the pilot and ranked it fourth against the competition. As that wasn't good enough, the company destroyed all 600 of the pilot blades and went back to the drawing board.

Several specification changes and prototypes later, they settled on the serrated blade and the just-right length of the Nagomi bread knife that today is eagerly sought by chefs and pastry chefs around the world. It's a winner with proud Mitsuboshi employees, too, who now rank it Number 1.

