

BLUE GROTTOS.

CAPRI, lying at the southern end of the Bay of Naples, is one of the most beautiful islands in the world, and one of its most interesting points is the Blue Grotto. The cliff looks so massive as your skiff glides along its foot you would never dream that waves could hollow deep caverns in it; but suddenly your boatman tells you to stoop and the boat slips through an opening rising three feet above water, and not to be entered except in the calmest weather. There is no transition from bright Italian sunshine to deepest gloom. When you regain the use of your eyes the scene is perfectly fairy-like. Things have "suffered a ~~small~~ change into something rich and rare." Every ripple is of ~~the~~ flame. The oars drip molten silver. Above water all is by contrast muddy brown, even the face of that fair English girl opposite. The boatman plunges in for a franc, and lo! the dark Italian has become an Olympian god with shining, celestial limbs,—a statue in burnished, living silver. His head alone is above water, and remains of the darkest bronze. We wondered at first why everything under water was so brightly lighted while all above was dark, but an explanation is not hard to find. All the light that enters the grotto is reflected from the bottom outside, and so takes on the vivid blue of the water of the Mediterranean. This accounts for the color. Most of the light entering the grotto strikes the surface of the water from below at such an angle as to be totally reflected. In this way it illuminates only what is beneath the surface. Any one can study total reflection by holding a tumbler of water above the level of his eye so as to see the lamp-light, for example, reflected from the surface. The gleam will be like burnished metal. But while we are theorizing on these charming effects the boatman has once more taken his seat, and we glide out of fairy land into the dazzling sunlight of everyday Italian life.

Nothing can be compared with this Caprian cave but grottoes hewn in the ice of a glacier. The light that reaches