The Ends of the Moon
The lunar poles are loaded with interesting features.

Often when observing the Moon we look at conspicuous craters such as Plato, Copernicus, Ptolemaeus, and Tycho. Their walls and floors are clearly visible because these craters are near enough to the center of the Moon's face to appear as circles or broad ovals. But the Moon is a sphere, even though we see it as a flat object in the sky. When we look farther from the Moon's center, we're looking around the curve of the sphere. Crater rims become foreshortened or squashed into narrower ellipses until finally they're seen in profile at the edge, or limb, of the Moon. While this effect makes identifying features more challenging, it has the benefit that many landforms clump together in one eyepiece view.

A great place to appreciate the compression of features is along the southern limb of the Moon, as shown in Stefan Lammel's wonderful image below. This area is dominated by shadow-filled craters and massive peaks rising up to 25,000 feet above the surrounding terrain. Because the south pole is the center of this limb, the Sun is never high in the sky. If you were standing on one of these tall polar mountains, you would see the Sun skim across the northern horizon.

The crater in the right foreground is Moretus, a 70-mile-wide crater similar to Tycho and Copernicus. Like them, it has terraced walls, a flat floor, and a central peak. Moretus is at 70° south latitude, and foreshortening makes it appear about twice as wide horizontally as it is vertically, even though it's completely circular. Positioned at the limb is a larger circular crater with the same features as Moretus.

The crater Drygalski lies at 80° south latitude and is foreshortened so much that it appears eight times as wide as it is high. We can almost see it in profile, and recognize that the crater is really very shallow — although

Lunar South  Formerly known as the Leibnitz Mountains, these features are recognized by modern selenographers as the rim of a giant farside impact basin seen edge-on from our terrestrial vantage point. Due to foreshortening, craters Drygalski and Moretus both appear very different, but are actually quite similar in every way but size.
it’s 93 miles in diameter, its depth is only 3.2 miles, about 3% of its diameter. The word crater comes from a Greek word that means bowl, but large lunar craters are more like saucers than bowls.

The peaks seen near the limb are the tallest mountains of the Moon, but they don’t have names. In the 1800s they were called the Leibnitz Mountains, but that name was deleted later because lunar scientists were not certain they actually existed. These tall mountains are real, and are part of the rim of a giant farside impact basin like the one that contains Mare Imbrium. This South Pole-Aitken Basin is about 1,600 miles in diameter but only 6 miles deep — even shallower (compared to its depth) than Drygalski!

At the opposite end of the Moon is the north polar region, which also has long shadows but fewer dramatic mountains and deep craters. This area is dominated by broad, flat-floored craters that are shallow and often have missing walls. These were originally deep impact craters, but they were partially buried by large deposits of material thrown out from the formation of the nearby Imbrium impact basin. The bright-rimmed craters Scoresby and Anaxagoras are clearly younger features that formed after the Imbrium event.

I like the fact that some of these north polar craters bear the names of great explorers of Earth’s North Pole. Americans Robert Peary and Richard Byrd, and Norwegian Fridtjof Nansen. Peary and Byrd are at 89°N and 85°N, respectively, and a little to the east is Nansen. These names personalize the craters, making them easy to remember and, after awhile, familiar friends.

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FAR NORTH Anaxagoras at 73.4° N is a relatively young feature sporting terraced walls, a small central peak, and bright rays that are visible when the Moon is near its full phase.