Compared to other cactus-rich areas of the world, eastern Brazil has relatively few genera of globular cacti. There are just three actually: Discocactus, Melocactus and Uebelmaninia (though the last becomes short-columnar in age). But the paucity of globular genera is compensated by the wealth of species. The majority of the Discocactus species are native to Brazil, over half of all Melocactus species are found here, and Uebelmaninia is endemic—it is found only in Brazil. Perhaps more significant is that Discocactus and Melocactus are the only genera of globular cacti that develop a cephalium—a highly modified portion of the stem in which the structure of the ribs is lost, and areoles become densely packed together, producing copious amounts of bristles and wool that serve to protect the developing flower buds and unripe fruits. In fact, this is the cephalium’s only job, since it produces no chlorophyll, and thus is not green and does not perform photosynthesis.

Discocactus and Melocactus have what is called a terminal cephalium, because it is produced at the apex of the stem, replacing the green, ribbed growth of the juvenile plant (the development of the cephalium is the onset of maturity in these plants, because they only produce flowers and fruits from the cephalium). But a cephalium can also occur on just one side of a plant (a lateral cephalium), or a cephalium can be apical but revert to a normal stem that grows through it, the whole process being repeated each season so that the successive cephalia form rings along the plant’s stems. These are called ring cephalia.

When it comes to plants with cephalia, eastern Brazil has an edge: many genera of cephalium-bearing cacti, producing among them all three types of cephalia, can be found here. In fact, Brazil has the greatest diversity of cephalium-bearing cacti, with the majority of the genera only found here. Besides those mentioned, the other genera of cephalium-bearing cacti from Eastern Brazil are Arrojadoa, Coleocephalocereus, Espositoopsis, Facheiroa, Micranthocereus, and Stephanocereus, plus a few species of Pilosocereus.

We began our trip near Salvador, the capital city of Bahia, with a visit to the white sand dunes north of town near the airport. Four cactus species are found at this habitat: Pilosocereus catingicola ssp salvadorensis, Pilosocereus pentaedrophorus, Cereus...