## Prologue: "Begotten, not made"

"The silent crowd of pilgrims sitting cross-legged on the desert floor in the shadow of Bare Mountain at Crater Flat numbered about thirty thousand. They had made their way there on foot, except for the young children and the disabled, who had ridden with the group's supplies in mule-drawn covered wagons. All had been refreshed with water and a simple but nourishing meal shortly after having arrived at their destination at the end of their two-hundred-mile journey.

"Their route northwards and westwards had taken them from the outskirts of Bakersfield, where the huge Sujana Foundation Hospice is located, first to the grounds of the Isabella Lake Pavilion, which the Foundation operates as a nursing home and palliative care facility. There they had rested briefly and built up their strength before striking out on the most arduous segment of the pilgrimage, first turning south and following Route 178 over the 5,000-foot Walker Pass through the Sierra Nevada mountain range, then swinging north again through Indian Wells Valley by China Lake, through the Argus Range and on into Panamint Valley. The long column was then in the desert and moving more slowly as it entered Death Valley, heading north, still using Route 178 to Emigrant Junction, where it swung west again on Route 190.

"The deserts in the southwestern United States bloom in springtime, a three-month profusion of riotous color among the grasses, cacti, shrubs, and annuals, all competing for the attention of pollinating insects in the brief interlude before the brutal summer heat strikes. Amongst the shrubs there is the creosote bush, with flowers of brilliant yellow; the indigo bush, blue; the desert holly, flowering greenish-yellow, with leaves that later turn a silvery grey; and the Death Valley sage, combining purplish flowers and white seed-cases. There are barrel cacti and

the calico cactus, as well as the beaver-tail cactus with its extraordinary magenta flowers in springtime. The flowering plants, which hunker down at ground-level during dry years and triple in size in the wetter ones, include many varieties of evening primrose, the gold poppy, desert heliotrope, whispering bells, and two kinds of daisy, desert ghost and desert star. At higher elevations on the surrounding hills and mountain ranges are the trees — pinions, juniper, mountain mahogany, and bristlecone pine —, while around springs and watercourses on the desert floor cottonwoods, willows, velvet mesquite, and screwbean mesquite trees grow. The pilgrims were in awe as they passed by these hardy survivors ensconced in the forbidding landscape.

"When the column reached Stovepipe Wells they were at sea level — or what used to be sea level, before the seas had started rising a half-century ago. They transited the Funeral Mountains and entered the Amargosa Desert, finally reaching the spot where the little town of Beatty, Nevada once stood, and where signs were posted telling them that they were nearing their destination. A few miles further on, around mid-day, the dry and dusty contingent stumbled into the encampment prepared for them on the western edge of Crater Flat, a valley floor sandwiched between Bare Mountain to the west and Yucca Mountain to the east.

"Onwards from Isabella Lake their column had been guided at the front by a group of ministers from the Church of the Red Planet, identified by the simple logo they wore, a reddishpink orb. Then, at the spot along Route 178 where the pilgrims reached the entrance to Death Valley National Monument, the column had been met by officials from the Yucca Settlement, who were identified by their own distinctive insignia, a circular design showing a great mountain peak against a background of yellow triangles, the symbol of radioactivity hazard. The officials were there to offer the pilgrims entry, for the Settlement's boundary now extended westwards to the foothills of the Sierra Nevada range, and passage through its territory was prohibited unless a transit permit had been granted.

"The pilgrims were offered a simple meal and then rested their weary limbs. Towards the end of the afternoon their preachers had conducted the first of the series of ceremonies marking the Festival of the Prophet, which would culminate three days hence with a sumptuous vegetarian banquet. Throughout the afternoon and on into the early evening the crowd's anticipation mounted steadily, however. Their gaze was fixed on the crest of Bare Mountain, where the spires of the Mother Church stood. For they had been promised that on this night the Prophet Marco would descend from Bare Mountain and walk among them."

Reading from her notebooks, my stepmother Hera had recounted this dream of hers to me some years ago, to considerable hilarity on her part, as well as on mine, shortly after my return from my aborted mission to Mars; I stumbled on it again whilst reviewing the pile of documents I assembled in order to compile this volume. Although she is adamant that upon close scrutiny the content of our nocturnal movie-making is comprehensible, I hardly know what to make of this script, since I'm no more religiously-inclined, in the conventional sense, than she herself is. Yet if we were to defer to her opinion in the matter, how might the hidden meaning be interpreted? The maxim known as Occam's Razor counsels us not to 'increase, beyond what is necessary, the number of entities required to explain anything.' The multitude of pilgrims in her little parable might be just the type of superfluous entities that the estimable philosopher warns us to be on guard against. So is there a simpler explanation on offer? Maybe she just missed me during my brief journey away from planet earth?

No, there is a bit more to the business than that. Hera may not be a "religious" person, at least, not in the eyes of true believers, but I do believe she is, and has been for some time, a part-time theologian. So when I asked her what the dream meant to her, she replied: "I often have such dreams, Marco, because my mind is obsessed with Biblical imagery. You will recall, I'm sure, the

protracted intellectual warfare I engaged in with my father, when I challenged his facile assumption that he had the right to engineer his children. The creation story in the Book of Genesis was indispensable to me in helping me to form my own ideas for those battles. You may also recall how I used that story against him: That in his role as scientist and genetic engineer, he was operating as if he were a stand-in for the God of Genesis, who designs and implements His prelapsarian creation in a state of moral innocence. I told him that there was no such innocence anymore and that, metaphorically speaking, his acts, as well as those of his peers who were engaged in similar enterprises, could be regarded as the second stage of Original Sin. Or words to that effect.

"When I colluded with him and my sisters in the creation of our Second Generation, these wonderful children now growing up in our midst, I did so with full awareness that as a new species they would carry this blemish in their genes to the very end of their time on earth. But it isn't the same blemish that humans bear within them — the one which was introduced when they defied their God's express command to forego the fruit of the Tree of Knowledge. And so, because the stain is of a different kind, our path to our own salvation must differ too. What we yuccans must do to expiate our sin struck me like a thunderbolt one day, when for some reason my mind had cycled back to some marvellous language in the Nicene Creed, one of the great texts of Christian faith: The passage says of Jesus that He was 'begotten, not made, being of one substance with the Father.'

"All of creation was made, fashioned by God's hands – but Jesus was 'begotten.' Then I said to myself, Yes, precisely, this is *my* faith: My kind too is begotten, not made, not worked to a plan by some disembodied deity. We are begotten of the earth, begotten of nature's evolutionary, randomized trials. We were not made for a purpose, we were not worked to the specifications of a plan: We emerged, spontaneously, accidentally, prepared for a destiny no different from that of

all other nature-begotten species: To have our moment of glory and then to disappear forever, and in so doing to prepare the way for those new species who will follow us. I believe that it is our solemn duty to acquiesce in this shared fate."

"If I might interrupt your sermon for a moment," I said laconically, "I am most anxious to hear about your path to salvation."

"I sense a whiff of sarcasm in your question, my dear son, but I will gratify your urge for enlightenment nonetheless, since you so obviously require it. We were remade, slightly, to our own father's design, and this act cannot be undone; we cannot wash away the sin, but only expiate it. We will do so by caring for the earth, by helping to reverse humanity's cancerous dominion over all else. We will restore the balance in nature's creation, the once-generous spaces where others flourished free of human interference, so that they might do so again. Our fate is bound together with that of all living things, because we carry in us genes whose origins predate the branching of plants and animals, a billion years ago.

"But we will take special care of our sisters and brothers, the great ape species, because for our own salvation we must: We were begotten simultaneously with them, their natural makeup is virtually identical with ours. More to the point, we have a stake in their future, as do they in ours. We once branched from the bonobos, five million years ago or so. What novel and wonderful relatives of ours might appear from further spontaneous branchings in the *Hominina* subtribe, where humans, gorillas, and chimps co-exist? We have driven them right to the edge of extinction, because we covet every inch of the earth for our own needs. We have a duty to ensure that their kingdoms are restored to them. If we discharge this duty, as well as our larger responsibilities for the welfare of living nature, we may ask for forgiveness."