

FRANCESCO MALLEGNI, A University of Pisa paleoanthropologist, solved the 13th-century mystery by conducting DNA tests on remains found earlier this year in the Cathedral of San Francesco. The scientist—known as



the "professor of excellent cadavers" for work that includes reconstructing the skull of early Renaissance artist Giotto—examined the five skulls and bones discovered in a tomb in the former chapel of the Gherardesca family. Mallegni found that Ugolino not only did not eat his descendants, but that he was hardly in a condition to eat anything at all.

Mallegni spoke to NEWSWEEK's Nicole Martinelli about his findings—and why Dante wrote what he did. Excerpts:

NEWSWEEK: How can you be sure that these are the remains of Count Ugolino and his family?

Francesco Mallegni: We can be about 98 percent certain. The results are from genetic tests—mitochondrial DNA, which is inherited through the mother—and they tell us how the bones are related. Gaddo and Uguccione [Ugolino's sons], for instance, were brothers ... The two grandchildren Nino and Anselmuccio were said to be cousins by unrelated mothers and the tests bore that out as well. They were all very similar in bone structure—very tall for that time, all about 1.8 meters [almost 6 feet]. We also had samples from living Gherardesca family members, so we put together what we know historically and what we can learn scientifically.

What do the latest tests tell us about the count? We had already dated Ugolino's remains to be about 75-80 years old and knew that he was in a precarious state of health. Now we are sure he had not eaten any meat during the last period of his life. Even if he had wanted to, it's extremely unlikely he would have had the strength to become a cannibal. He had also lost most of his teeth. The other part of Dante's story that doesn't fit is directly related to age. How would an ill grandfather manage to outlive his sons [who were in their 40s] and grandsons [in their 20s] in such extreme conditions? They had a much better chance of surviving than he did.

What were you able to find out about his infamous diet?

All of the prisoners suffered extreme malnutrition during the time they were captives. They ate very little, mostly bread, of extremely poor quality. The research shows that small stones from the grinding process were mixed in with the wheat and damaged their teeth—this after a lifetime of a very rich diet, which had given Ugolino in particular plenty of cavities.

Francesco Mallegni, holding the cast of the head of painter Giotto



What really killed them, then?

It's pretty safe to say that they all died of starvation. In Ugolino's case we also discovered that his skull was partly smashed, so the cause of death can't be said for certain.

So Dante got the story wrong?

Let's say that he wrote a beautiful, dramatic verse about a political enemy. Dante did everything he could to make the scene poignant. We know now, for instance, that the grandchildren were adults, even though they are described as being of "tender age." One of the grandchildren was in fact already a father, according to archive data. The findings don't, of course, take anything away from Dante. I kept the canto [about Ugolino] in front of me while working on the project. Clearly a scientist and a poet see the world differently, but it makes for fascinating work to compare the two.

Sounds like you spent a lot of time studying Dante, too.

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It was inspiration for the project. Reading and rereading it made me think that perhaps Dante only insinuates that Ugolino ate his offspring. In the beginning he is gnawing on something, in the flashback his kin are pleading, "Eat us to save yourself" and finally, "Then hunger did what sorrow could not do." It is often concluded from that last part that he ate them. But I prefer to think of the verses as a magnificent orchestration intended to whip up hatred of the Pisans for killing Ugolino and trying to wipe out his family, too. It's more about his captors driving Ugolino to do something horrible than whether he actually did it. The political message is lost on us today, but it remains a very memorable canto.

Do his living descendants now expect some kind of historical redress?

They were enthusiastic to go through the testing and are satisfied with the results—it's enough vindication I think. They have decided that the bones will be given a proper burial this time, though.

What's next for the "professor of excellent cadavers?"

[Laughs.] It's an unfortunate nickname, but one that sticks. Well, the composer Vincenzo Bellini is next on my list. He died at 33 under mysterious circumstances. At the time he was living with a woman that kept his friends out, saying he was unable to receive visitors. Maybe she poisoned him, who knows? What they weren't able to find out in the 1800s we can now, and local governments are very interested in clearing up these old mysteries.

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