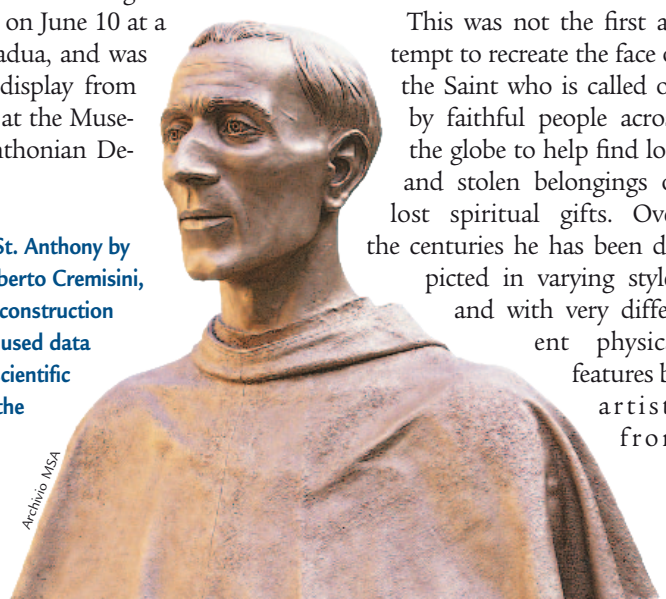
IN SEARCH OF ANTHON

Through the wonders of modern science and technology, an international team of forensic experts claims they have reconstructed a faithful copy of St. Anthony's visage

By Philippa Hitchen

ALMOST eight centuries after his death, Anthony of Padua has been 'brought to life' by a team of international forensic researchers who have reconstructed the face of our beloved saint. The reconstruction, using the latest 3D technology, reveals a broad-faced, swarthy skinned young man with deep set eyes, a prominent nose and full lips forming a ready smile above a dark stubbly beard.

This experiment with cutting edge technology to help us understand and appreciate one of the early teachers of the Franciscan movement was carried out by the University of Padua's Anthropology Museum, together with the Centre for St. Anthony Studies and the University of Sao Paolo in Brazil. The astonishing result was presented on June 10 at a congress in Padua, and was then put on display from June 12 to 29 at the Museum of the Anthonian Devotion annexed to the Basilica of St. Anthony, where the Saint's mortal remains are kept and visited by pilgrims from all over the world. The reconstructed face formed, for a time, the centrepiece of the Museum, which explores popular devotions and legends about the life of the saint.



Bronze bust of St. Anthony by Italian artist Roberto Cremisini, a specialist in reconstruction techniques who used data from the 1981 scientific examination of the Saint's skull

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Mediterranean complexion

This was not the first attempt to recreate the face of the Saint who is called on by faithful people across the globe to help find lost and stolen belongings or lost spiritual gifts. Over the centuries he has been depicted in varying styles and with very different physical features by artists from

Y'S FACE

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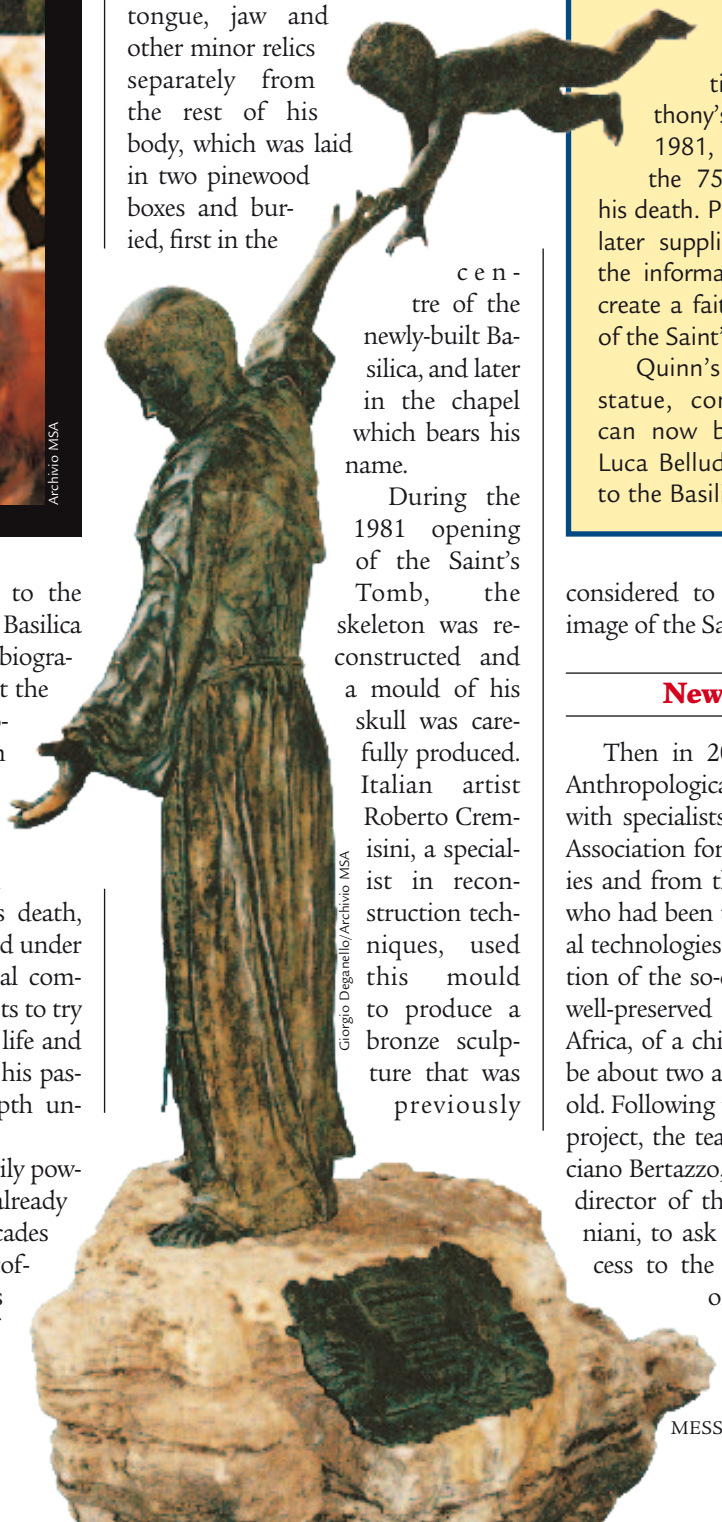
Giotto in the 13th century to the contemporary frescoes in the Basilica by Pietro Annigoni. The first biographies of the saint, who died at the age of just 36, described a 'robust' man of Mediterranean complexion – not surprising for a person of Portuguese origins.

In January 1981, to mark the 750th anniversary of his death, the Saint's tomb was re-opened under the supervision of a pontifical commission and a team of scientists to try and find out more about the life and death of the saint known for his passionate preaching and in-depth understanding of the Scriptures.

St. Anthony's extraordinarily powerful preaching skills had already been confirmed only three decades after his death when his coffin, buried according to his wishes in the little church of Santa Maria Mater Domini (now incorporated in the Basilica), was opened to remove some relics for veneration in other churches. To the great surprise of all present, Anthony's tongue was found to be incorrupt, causing St. Bonaventure, Minister General of the Franciscan Order, to exclaim, "O blessed tongue, you have always praised the Lord and led others to praise him! Now we can clearly see how great indeed have been your merits before God." It was then decided to conserve the saint's tongue, jaw and other minor relics separately from the rest of his body, which was laid in two pinewood boxes and buried, first in the centre of the newly-built Basilica, and later in the chapel which bears his name.

During the 1981 opening of the Saint's Tomb, the skeleton was reconstructed and a mould of his skull was carefully produced. Italian artist Roberto Cremisini, a specialist in reconstruction techniques, used this mould to produce a bronze sculpture that was previously considered to be the most life-like image of the Saint in the modern era.



Giorgio Deganello/Archivio MSA

New initiative

Then in 2012 experts from the Anthropological Museum teamed up with specialists from the 'Antrocom' Association for anthropological studies and from the Arc-team in Trento who had been testing their new digital technologies on a facial reconstruction of the so-called 'Taung Child', a well-preserved fossil, found in South Africa, of a child's skull estimated to be about two and a half million years old. Following the success of that first project, the team approached Fr. Luciano Bertazzo, a Franciscan friar and director of the Centro Studi Antoniani, to ask if they could have access to the moulds of the heads of St. Anthony and his disciple, Blessed Luca Belludi.

QUINN'S ANTHONY

Besides Roberto Cremisini and Cicero Moraes' reconstructions, worthy of mention is also the statue created by Lorenzo Quinn, son of renowned Mexican-American actor Anthony Quinn.

Scientist Vito Terribile Wiel Marin carried out the Pontifical Scientific Examination of Saint Anthony's mortal remains in 1981, on the occasion of the 750th anniversary of his death. Professor Wiel Marin later supplied Quinn with all the information he needed to create a faithful reconstruction of the Saint's face and body.

Quinn's marvellous bronze statue, completed in 1995, can now be admired in the Luca Belludi Cloister just next to the Basilica.

Giovanni Pinton/Archivio MSA

From left: Nicola Carrara and Cicero Moraes, Fr. Enzo Poiana, Rector of the Basilica, Luca Bezzi, Fr. Luciano Bertazzo at the June 10 congress in Padua

Archaeologist Luca Bezzi of the Arc-team explained to journalists at the presentation that the mould made in 1981 was photographed from many different and overlapping angles to create a digital replica of the Saint's head, using techniques known as Structure from Motion (SfM) and Image-Based Modeling (IBM). The whole project, Bezzi noted, was done using Arche Operating System technology (Python Photogrammetry toolbox, MicMac and OpenMVG) that is freely available online.

These images were then sent to Brazil to be examined and worked on by 3D designer Cicero Moraes of the University of Sao Paolo, renowned for his work in forensic facial reconstruction. The Brazilian expert was asked to reconstruct the Saint's face knowing only that the skull belonged to a 36-year-old Caucasian male. "At each step I asked myself, who was that man?" Moraes told journalists at the presentation of his finished work. "When I found out, I was speechless, literally amazed. Although I am not religious person, I felt a huge responsibility. Millions of people in the world would be able to see the face of their saint!" Moraes said.

Faithful reconstruction

All those involved in the project agree that their work has produced "one of the most faithful reconstructions of the face of St. Anthony." The fastest canonisation in history, Anthony was declared a saint just eleven months after his death, in May 1232. Seven centuries later, in 1946, Pope Pius XII proclaimed him a Doctor of the Church.

Commenting on the significance of this new image of the Saint, the curator of the University of Padua's Anthropology Museum, Nicola Carrara, explained that over the centuries saints become icons and are often depicted in a particularly pious way.

This new, realistic face, Nicola Carrara said, turns this classical image of the saint upside down, strip-

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Valentina Salmaso's photoshop rielaboration of the Saint's visage produced by the University of Padua's Museo di Antropologia

ping him of the cultural and religious baggage that we naturally tend to associate with him. "This reconstruction cleans away from his face that which we want to see and shows us that which he really was."

Many symbols

Speaking at the presentation of the face of the Saint to the public, the director of the Centro Studi Antoniani, Fr. Luciano Bertazzo, noted that many different symbols have been used to depict the life and legacy of the Saint in art works over the centuries. Sometimes he is seen with a lily for purity, a torch for the fire of his preaching, or a book for his great wisdom. He has been portrayed preaching to fish, when people would not listen to his message, or with loaves of bread which were offered by his followers for the many miracles or blessings received. Often he is depicted with a child in his arms or standing on a book, recalling an event attributed to the Saint who was praying so intensely one night that Jesus himself appeared from the pages of his prayer book in the form of a young child. All these images of St. Anthony, Father Bertazzo said, from Giotto to the more contemporary works of art, have helped to develop a personal picture of the young friar as a man who is close to us in our times of need. We have been less concerned about his real features and more interested in the symbolic figure of our imaginations. With this new, startlingly life-like face of the young patron saint of Padua, we can now imagine him, just as he really was, teaching, preaching and bringing the message of God's love to the world, almost eight hundred years ago. ✦

FACIAL RECONSTRUCTION

Forensic artists utilize the three-dimensional facial reconstruction technique from skeletal remains. The technique is initiated by placing the skull (or a life-size cast of one) on a workable stand, where the skull can easily be tilted and turned in all directions. Proper tissue depth data are determined by race, gender, and age. Artificial eyes are then placed in the skull's eye sockets, centred and at the proper depth. The tissue markers are glued directly onto the skull. Clay will be systematically applied directly on the skull, following the skull's contours; paying strict attention to the applied tissue markers.

Various measurements are made, and logged, to determine nose thickness/length, mouth thickness/width, and eye placement. Information such as the geographic location of where the deceased lived, his or her lifestyle, and the various information provided to the artist by the Forensic Anthropologist and other professionals, is heavily relied upon when completing the reconstruction. Hair is accomplished by means of a wig, or by applying clay to represent hair.

One must, however, bear in mind that the finished product only approximates the person's real appearance, because the skull alone does not reflect soft-tissue details (eye, hair, skin colour, the shape of the lips or how much fat tissue covers the bone). Yet a facial reconstruction can put a name on an indentified victim in a modern forensic case or, in an archaeological investigation, a face on history or on a saint.

Carolyn Kaster – AP Photo

Facial reconstructions based on the skulls of two sailors recovered in 2002 from the wreck of USS Monitor, which sank during the American Civil War

Nicola Bianchi / Archivio MSA

The reconstructed face formed the centrepiece of the Museum of Popular Devotion, which explores popular devotions and legends about the Saint's life around the world