



Bible leaves a mystery to be solved

The Holy Bible is filled with many mysteries but none quite like the one recently discovered inside a 450-year-old Anglican 'Great Bible' in The University of Western Australia Library's collection.

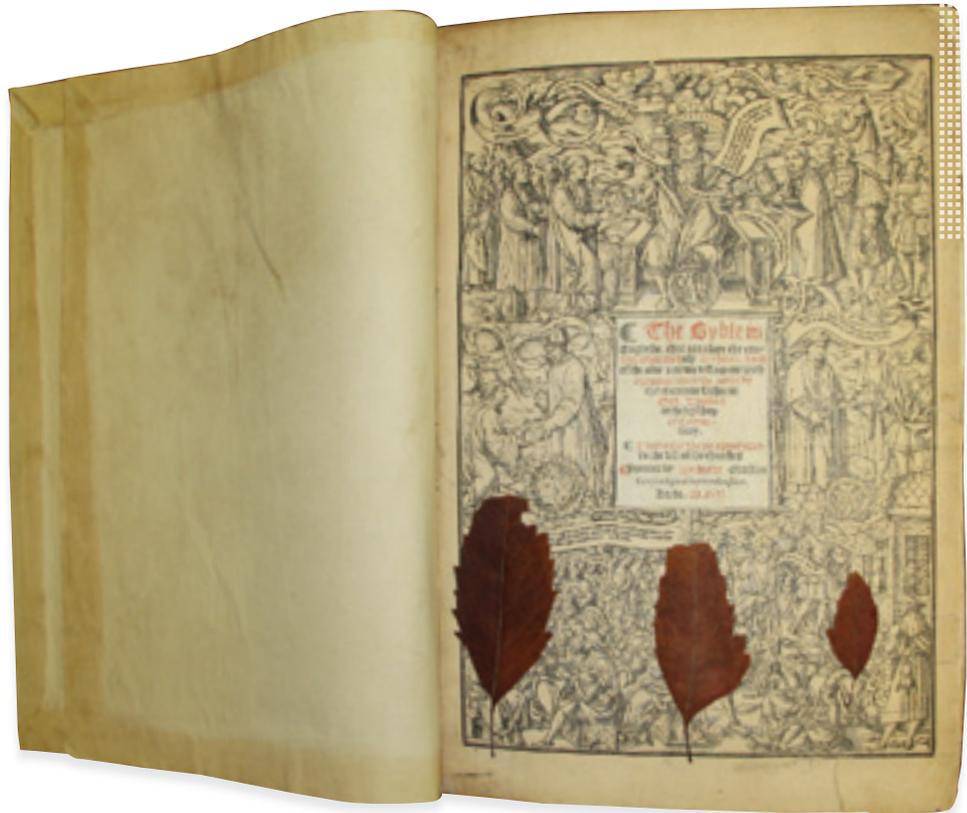
Earlier this year this particular Bible, which had not been requested for viewing for more than 20 years, had been perused by a Library patron in the Scholars' Centre. When returning the Bible to the stacks, Susana Melo de Howard, Senior Library Officer, noticed three old, dried leaves inserted between some of the pages.

Very excited and consumed by thoughts that perhaps a monk at the library of the mediaeval cathedral of Ely in England could have used these leaves to mark the text, Susana promptly requested assistance from Science Librarian, Matt Stephenson, who contacted the academics at the School of Plant Biology to help with the identification.

Associate Professor Chuck Price, an ecologist and evolutionary biologist who has recently joined the School of Plant Biology from Georgia Tech, recognised a unique opportunity to use his breakthrough software technology, the Leaf Extraction and Analysis Framework Graphical User Interface (LEAF GUI), which identifies and measures the geometry of thousands of veins in leaves in minutes.

However, the leaves needed to be carbon-dated, to determine their age, for Dr Price to use his program for identification. At this point, Dr Pauline Grierson from the School of Plant Biology decided to ask for help from Professor John Dodson at the Australian Nuclear Science and Technology Organisation's (ANSTO) Institute of Environmental Research.

After reviewing a photo of the leaves, Professor Dodson was also unsure of the species, so he forwarded the photo to



his colleague, Dr Fraser Mitchell at Trinity College Dublin. Dr Mitchell suggested they may be a member of the Proteaceae family of plants, better known as the Banksias and grevillea, and therefore could be Australian leaves.

As the intrigue of the mystery started to fade somewhat, Professor Dodson reviewed the findings and felt the leaves looked too thin, as non-rainforest Proteaceae leaves are quite thick. Determined to persevere on this quest, he sent the photo to Professor Steve Hopper at the Royal Botanical Gardens at Kew in London. Kew Gardens finally provided a more solid identification, suggesting the leaves were from a plant called *ulmus glabra*, a type of elm commonly known as Wych or Scots elm. Wych elms grow in the central west of the United States, across all the way into Maine and Vermont, as well as Canada and most of Europe. With this latest discovery, the mystery gained momentum again.

Based on the English origin of the Bible and the improbability that it had made its way from England to North America before arriving in Perth, Professor Hopper concluded the leaf was more than likely European, meaning these were potentially very old leaves.

"There are three leaves and they are each different sizes," explained Professor Dodson. "This would indicate that the person who collated them was probably a naturalist and interested in the size variation – assuming they each came off the same tree."

The next step in solving the mystery was to apply isotopic and radiocarbon dating techniques. To conduct these studies the middle-sized leaf was ground up and split in two. The Plant Biology team at UWA are running stable carbon, oxygen and hydrogen isotope ratios from organic matter on one half in order to provide insights into the geographical origin of the leaves.

> [Continued on page 2](#)

Supporting new developments in eResearch



The University of Western Australia is a research-intensive university, with a high international profile in research across a wide range of disciplines. Our researchers have felt the full impact of all the major changes currently affecting the nature of academic research, including the increasing focus on research assessment (especially through the ERA programme), the deluge of research data, and the proliferation of digital environments and infrastructure.

Information Services recently reviewed the support it provides for researchers, drawing on a previous review of library

> [Continued from page 1](#)

The other half of the leaf was sent to ANSTO's Institute of Environmental Research for radiocarbon dating to find out the age of the leaf.

Susana, who is currently on holiday in her adopted second-home of Belves, in France's Perigord region, was thrilled to receive an email from Professor Dodson on August 12th:

*Hi Susana,
I have just received an age on the leaf. In radiocarbon years it is 310 years old (plus or minus 40 years). We can convert this to calendar age which has the limits AD1471 to AD1653. The most likely age (in statistical terms) is between AD1546 to AD1630. I reckon it is about as old as the Bible itself.
John*

So although we may never know for sure, Susana's visions of a medieval leaf-pressing monk remain a very plausible reality.

support for research communities and a comparative international study of the top fifty universities.

One important outcome has been the formation of a new organisational unit, known as the eResearch Support and Digital Developments Unit.

This new Unit aims to provide a focus for eResearch activities across Information Services. It is designed to bring greater coherence to a range of previously disparate initiatives, and to assist with turning projects into services and maximising the level of co-investment and operational support for new projects. It collaborates at a strategic and programmatic level with other areas of the University which support research, and also provides a focus for the involvement of Information Services in national collaborative projects and services.

The Unit is responsible for leading the development of the Research Repository and digitisation programme, providing support for the ERA

process, and building up expertise in bibliometrics, citation analysis and research assessment measures. It has also taken on the management of the University's involvement in a range of national eResearch projects, including the Australian National Data Service, the Australian Data Archive, and AustLit: the Australian Literature Resource. It is responsible for ensuring that Information Services liaison staff are kept informed about new developments in eResearch and are able to respond effectively to enquiries about research data management. It also coordinates the management of the Information Services Web site.

The staff of the new unit include Dr Toby Burrows (Manager, eResearch Support), Kate Croker (Coordinator, Digital Repositories), Felicity Renner (Bibliometrics Coordinator), Ankur Sharda (eResearch Facilitator) and Jon Steingiesser (Senior Web Coordinator). They are located on the third floor of the Reid Library Building.

Facts about the Bible

- The Bible is one of the earliest printed editions in English, known as the 'Great Bible'. UWA's copy is a second edition, printed and published in April 1540, with a preface by Archbishop Thomas Cranmer
- The UWA Library bought the Bible in 1977 for £350 from a London antiquarian bookseller. It was purchased through the Friends of the UWA Library. Unfortunately the detailed purchase records are no longer available, but the Bible is known to have been at Ely Cathedral at some point in its history.
- The Great Bible (first edition 1539) was the first English Bible formally authorised for public use in every parish church in England – and pre-dates the King James Version by 72 years.

- The artwork on the title-page is traditionally ascribed to Hans Holbein. It shows King Henry VIII at the top, Thomas Cranmer (Archbishop of Canterbury) on the left and Thomas Cromwell (Lord Great Chamberlain) on the right – each with their coats of arms.
- The Bible is 42cm x 30cm x 13 cm and weighs seven kilos.



SUSANA MELO DE HOWARD WITH THE GREAT BIBLE

This article is an edited version of "Bible leaves us guessing" by Jane Howard, ANSTO, *Nuclear Matters*, Issue 3 June 2011, and also contains elements from "The secret life of leaves" by Lindy Brophy, *UWA News*, April 2011. Photos by Susana Melo de Howard and Azra Tulic.

Levelling the playing field in 2012

Librarians and Learning Skills Advisors from the StudySmarter team have been working together on an exciting new online course for 2012.

CARS (Communication and Research Skills) will be a compulsory unit for all first years, and will introduce them to the range of skills needed to research, write, present and work in teams.

CARS is grounded in the real experience of undergraduates. Lecturers and students discuss their expectations and experiences on video, and real examples of assignment topics, marking guides, good writing, referencing and oral presentations are used throughout.

First year is a critical year for undergraduates as they transition from school or work into the academic community. Many first years feel that they don't qualify to use the support systems available to them, or that other students know 'secrets' about succeeding at University.

CARS aims to give all students access to the same resources and information regardless of their discipline, and to clearly demonstrate the standards expected of UWA students. The collaboration between Information Services and the Study Smarter team means that students can learn about the full range of academic skills in one place. These resources will not only be available to students in their first semester at UWA but will be available for all students (and indeed to the public) at any time.



UWA and AMCOM sign \$9 million partnership

The University of Western Australia's computing power and storage capacity will be boosted through a new partnership with telecommunications and datacentres provider Amcom.

The partnership will involve Amcom hosting dedicated "cloud" services for UWA in Amcom's secure data centres in Perth. The initial contract value is \$9 million over three years and will provide UWA with hundreds of computer servers and more than 400 terabytes of storage, delivered across Amcom's secure, reliable dedicated geographical path diverse 10-gigabit fibre network between UWA and Amcom's data centres.

Dr Mary Davies, University Librarian and Director (Information Management), said the new services would put UWA at the forefront of hosted computer power and capacity and allow the University to concentrate on its value-added support for teaching, learning and research.

"As UWA's requirements increase, it is vital for us to strategically plan to provide our students, academics and researchers with all the computing power and storage to meet their future needs," Dr Davies said.

"Amcom has been able to provide us with a cost-effective, secure, reliable and dedicated product that gives us capacity and capability across the University. It is both simple for us to manage and user-friendly for our staff.

"Most importantly, it will mean our data is stored in Perth using dedicated infrastructure under a private hosted services agreement."

The cloud services market is rapidly expanding globally and provides customers with significant benefits in cost and scale.

Amcom CEO Clive Stein said the company was delighted to strengthen its partnership with one of Australia's most prestigious universities.

"We are now offering a suite of IT solutions hosted in the 'cloud' market to both new and existing clients in small or large business, and being able to offer one of Australia's top universities a dedicated, secure and solution driven 'cloud' product validates our strategic move into the market," Mr Stein said.

Sam Amsha, Senior Project Manager, explained that the scope of the project involved defining the requirements for the network, security, back-up, retention, restoring, virtual machines and storage for all of UWA.

The project team included Jack Bryant, Craig Williams, Albert Beh, Daniel Foster, Damian Bramanis, Richard Wotherspoon and Gareth D'Souza from IS, along with Jenny Yeap from the Business School.



Dr Grace Saw, (Director, Information Services at Bond University) recently returned to UWA to share ideas with Dr Mary Davies on a number of Information Services projects. Dr Saw worked at UWA as Business Librarian in 1996-1997 and was very keen to reconnect with some of her UWA colleagues from that time.

Front row (left to right): Dr Mary Davies, Amina Wilcox, Dr Grace Saw, Sally Kenton, Erin Fraser.

Back row (left to right): Kael Driscoll, Michelle Gunther, Will Hamilton, Dr Toby Burrows, Don McSkimming.

24 hour access to Reid Library

Students will be able to study in the warmth and comfort of the Reid Arts and Business Library 24 hours a day from Monday to Thursday, and until midnight on Friday, Saturday and Sunday from 2012.

The ground floor, first floor and the Scholars' Centre will all be open for those extended hours. Work has begun on refurbishing the ground floor to create a collaborative study area. Some modifications to the first floor and the entrance to the Scholars' Centre will also be made. A temporary collaborative study area has been created on the third floor of the Reid building while work is underway on the ground floor.

We're very excited to be able to provide extended opening hours in response to student requests, and look forward to unveiling the new space and furnishings at the same time as the University welcomes the first wave of students under the new course structure.

Can I suggest we have a chat?

Information Services has launched two new services as part of our continuing engagement with our online clients: **Suggestions and Chat.**

<http://suggestions.is.uwa.edu.au/>

After years of writing suggestions on paper, students and staff can now use the new online suggestions service to comment on any of our services or facilities.

Suggestions and responses from IS staff are posted online so that everyone can read and add their own comments or suggestions. This is in contrast to the previous print suggestions form which could only be posted and responded to on a notice board in each Library.

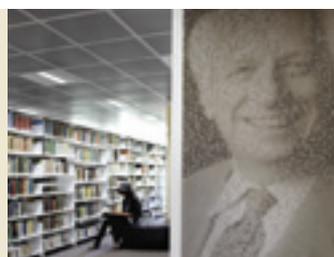
The service has been popular with users, with over 100 submissions so far. Examples include requests for additions to the collection, new software applications, and ideas for improvements to facilities.

Suggestions are tagged so it's easy to see what most concerns our users and check what previous comments have been made on a topic, with several threads generating a significant amount of debate amongst the user community.

www.library.uwa.edu.au/contact/sms-or-chat-on-ask-us

The Chat service, AskUS, allows users to get assistance from Research and Learning Support staff via their computer or smart phone, using Instant Messaging or SMS. Users of the service are very appreciative of the instant support available during the busiest study periods.

These virtual conversations have enabled IS staff to help many students in remote areas, or when they unable to come into a Library to seek help. However students have also used the SMS service from within libraries to discretely request that staff visit particular areas to remind groups of students about working quietly.



Contact us
Information Services
 The University of Western
 Australia
 M209, 35 Stirling Highway,
 Crawley WA 6009

Tel +61 8 6488 1777
 Regional students
 within Australia 1800 263 921
 Fax +61 8 6488 1012
 Email news-is@uwa.edu.au
 Web www.is.uwa.edu.au

Editor
 Kael Driscoll

CRICOS Provider Code: 00126G
 UniPrint 90085