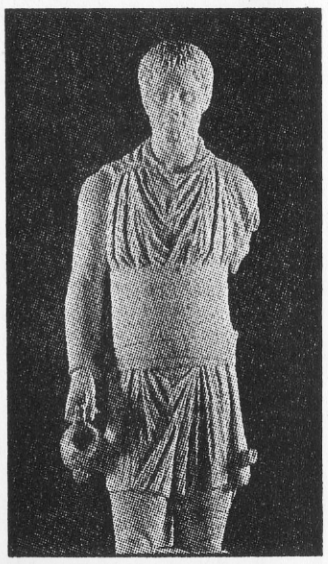
A prize student, her mentor and 11,000 priceless objects

Judy Steed



STATUE was among 11,000 Phoenician objects saved by U of T expertise.

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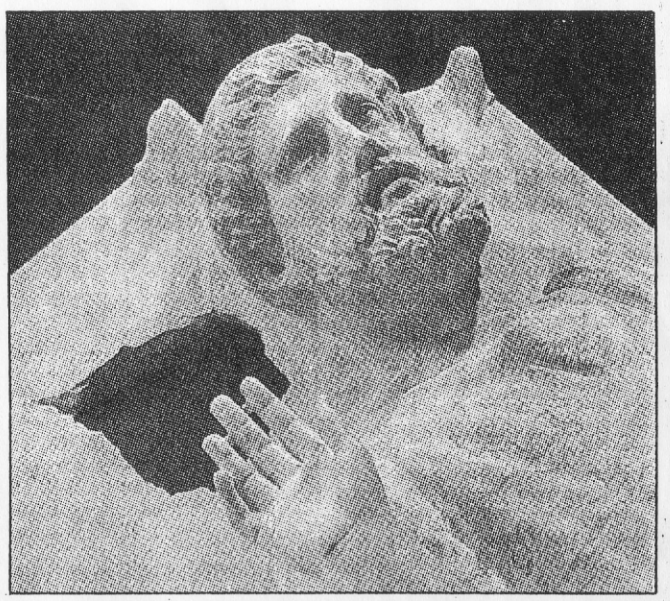
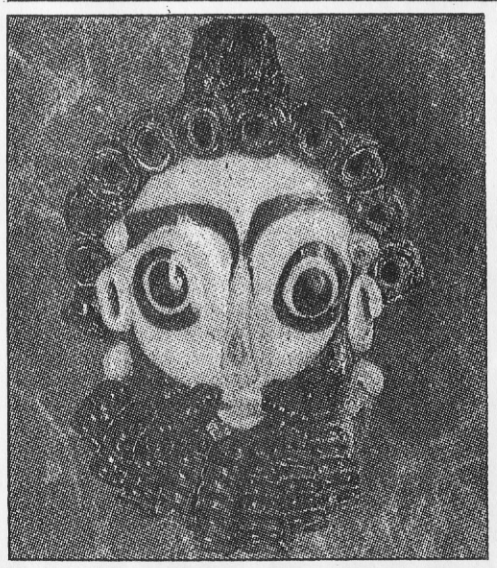
PERFECT TEAM: Ursula Franklin, left, an internationally known physicist with special expertise in ancient materials, inspired Vanda Vitali to follow in footsteps.





ARTIFACTS found crumbling in a storeroom in Tunisia were created as early as 8th century B.C.

They met at the University of Toronto in the late '70s, in mid-May, after exams were over, in Ursula Franklin's office at the department of metallurgy and materials science.

Vanda Vitali had just completed her B.Sc in analytical chemistry with a minor in fine art history, and was searching for a way to combine her major interests: science, art and ancient history.

Professor Franklin was, at that point, an internationally renowned physicist and professor of materials science within the faculty of engineering.

"For me, it was a *coup de foudre*," says Vitali, describing the meeting that changed the course of her life; she'd found her teacher and mentor. "Ursula inspired me, she opened doors for me . . ." And pointed toward a path that led Vitali to this:

A priceless collection of Phoenician artifacts created between the 8th century B.C. and the 2nd century B.C. — thousands of exquisite ceramic masks, pots, ivory carvings, gold jewelry, glass urns, textiles and stucco paintings — discovered in a heap, crumbling and corroding in a forgotten storeroom in Tunisia, part of the glory that was Carthage.

Twenty years ago, UNESCO organized a massive international effort to save the architectural remains of Carthage, the once-great Phoenician capital on the shores of the Mediterranean in North Africa. Defeated by the Romans in 146 B.C., Carthage survives as a magnificent archeological site, replete with Roman baths and villas, mosaics, vaults and amphitheatre, threatened now by a different enemy: the encroaching suburbs of Tunis.

In 1983, selected to join a Canadian team that was part of the UNESCO effort, Vitali was introduced to Carthage by a friend of Franklin's, Edith Wightman, a McMaster University classics [illegible] was murdered by an intruder at her McMaster office; Vitali returned to Tunisia, on a National Geographic project. Hooked on Carthage, she established a relationship with the people at the museum and finally, one day, museum officals took her to a locked storeroom and showed her a collection no westerner had laid eyes upon in modern times.

"It was 6:30 in the morning, and there it was, covered with dust and dead birds," Vitali says, still dazzled: "The richest collection of Phoenician objects in the world."

"Vanda was my graduate student, then," says Franklin, "and we realized this would be a lifelong commitment." Though Franklin had not seen the treasure trove — she was booked to go in January 1991, when the gulf war erupted, and had to cancel — she realized she'd "found the person out of all my students who understood this application of science — science with a human face."

The conjunction of their paths at the University of Toronto was fortuitous. Franklin landed there in the late '60s, after a long, difficult trek. Born in Munich in 1921, the child of an engineer-father with an interest in archeology and a mother who was a fine art historian, Franklin survived World War II in Berlin.

The first German scientist to come to Canada after the war, she arrived in 1949 — the year Vitali was born — with a Ph.D in physics and a loathing of war that would fuel her social activism.

"Seeing war turns you into a pacifist," Franklin says.

She was a physicist on a fellowship, working at the Ontario Research Foundation, specializing in ferro-magnetism (studying properties related to the behavior of metals).

Vitali, meanwhile, grew up around the Mediterranean. Her father was a painter and stay-at-home parent; her mother had studied at the Sorbonne and was a specialist in international affairs, working at UNESCO. Vanda, an only child, was educated in the American school system provided for diplomatic and military families abroad.

A brilliant student, Vitali graduated from an American high [illegible] U.S. She had the top scores in math and chemistry, won awards in science and physics, and didn't know what to choose "because everything was fun."

She horrified her parents by taking a few years off to wander the Mediterranean with her pals, having "life experiences," searching for a profession that would, in her words, "satisfy the brain and the soul."

When she was ready for higher learning, she chose the University of Toronto. Why U of T, when she could have gone anywhere, on scholarship, given her academic standing? She was attracted by its reputation, she says, and by Canada's image as an idealistic nation; and by then-Prime Minister Pierre Trudeau's enlightened international stance.

"Frankly, because I'd studied in the American education system, I had problems with the aggressiveness of American attitudes."

Following her meeting with Franklin, Vitali did her masters in applied science, focusing on the stability of materials, which took her into the field of nuclear waste disposal. Her Ph.D was in data analysis, applying statistics to material science, and her post-doc took her to artificial intelligence and semiotics, a study of the meaning of symbols and language.

What is the pattern here, in her quest for knowledge? "I was moving from analysis of the physical world to considerations of culture and psychology," Vitali says. "What is culture? What are the roots of knowledge?"

Such questions concerned Franklin in her approach to the study of ancient materials and archeological remains. Traditionally, the science of materials focuses on giving engineers the [illegible] will withstand the stresses and strains of their function.

Franklin applied her specialized knowledge of the physical world to cultural heritage, using high tech electron microscopes and carbon dating procedures to track "the unspoken record of the past," contained in Chinese bronzes, Roman pottery, Etruscan urns, Byzantine mosaics — "the products of the people," Franklin says. "They weren't the pharoahs and kings, they weren't the great 'I am's,' they were the people who made things, and in restoring their artifacts we restore their voices."

This is the lived history of daily life that so fascinates Franklin, whose eyes light up as she peers down the centuries at ancient manufacturing practices and technologies as expressed in fabric, pots and carvings.

In England she'd discovered a new field of scientific inquiry: archaeometry, the technical study of ancient materials, dating them, determining their origin and reconstructing past techologies of manufacture and production. Franklin imported this discipline to North America and developed it, at U of T, by establishing the Collegium Archaeometricum.

"Ursula drew people from across disciplines within the university, and from abroad," Vitali says. "She created an intellectual centre of expertise that made us the envy of every university." More than that, Franklin became recognized as a world leader in the field.

Franklin also became famous on other fronts, primarily as a feminist and leader in the peace movement. She and her husband (who have two grown children) joined the Society of Friends, otherwise known as the Quakers; she was always on hand to speak when such anti-war activists as [illegible]

"Ursula is the model of the concerned scientist," says John Polanyi, the Nobel Prize-winning scientist who participated with Franklin in anti-war activism.

Her concern about the barriers facing women in science led her to confront the subtleties of sexual harassment within academia. "Sexist jokes are part of the folk culture of engineering," she said in the mid-'80s. "It will stop only when the approval stops."

"Ursula set very high standards, moral and professional," Vitali says, "she expanded her students' horizons and marked us profoundly." Her impact has been recognized: she has received every imaginable honor and distinction Canada has to confer, from the Order of Canada to U of T's designation as the first woman "University Professor," a meritorious title that signifies outstanding academic contributions above and beyond the call of duty.

Vitali was being groomed to replace her mentor. She organized the Collegium's lectures and continued her work in Carthage, spending much of the past three years based in Tunis, funded by a CIDA grant that ends this year. She also spent three summers trekking through Syria with a French archeologist-friend, living in mud houses, sleeping with scorpions, walking 20 km a day and excavating sites dating back to 3000 B.C.

In Tunisia, Vitali's team faced special conservation problems. "We handled 11,000 objects, and with those numbers, you have to develop ways of teaching people, using methods that can be sustained in the Third World. You can't do what you'd do at the Smithsonian or the ROM."

Another difficulty was the contrast between CIDA's schedules governing expenditures of time and money, and "Phoenician ways." Vitali found the clash "maddening, at times. In Tunisia, everything is in perpetual flux; they are infinitely adaptable. We (in the west) have industrial standards and strict time lines. It's the biological, agricultural model, where you're at the mercy of weather conditions, versus the [illegible] became convinced that cultural preservation is an important aspect of international development. And this winter, she welcomed her Tunisian partners to U of T, where they showed a film about their work to an audience of distinguished scholars.

Abdelmajid Ennabli is a scholar and director in charge of the Carthage site and museum; his colleague Sihem Roudesli is in charge of the laboratories set up by Vitali and her team. They sing the praises of Vitali, Franklin and U of T's expertise.

"This is the first project of its kind in the Arab world," says Ennabli. "In the past, they take these art works to other countries, to Germany, to treat them and show them." Now, with Vitali's assistance, they've built a permanent exhibition which is attracting scholars and tourists from around the world.

Says Roudesli: "We treat all kinds of materials, bronze, textiles, masks made of ostrich eggs, objects that are 2,500 years old. We must treat them — before they disappear."

"This is the transfer of technology," says Vitali, who still speaks with excitement about "the shivers you feel when you look through an electron microscope at textiles that are 2,500 years old, and you can see how the yarn was spun. . . ."

In the midst of triumph, disaster: at U of T, in the wake of a severe recession and budget cuts, Franklin's centre of expertise, the [illegible] the university has treated Franklin horribly.

Now 72, Franklin has retired. Vitali, 43, is consulting to Edgar Pisani, president of the Institute of the Arab World in Paris, on establishing a data base on Arab heritage and culture. She will be in Morocco the first week of June, invited by the Moroccan ministry of culture to examine their collections and museums and to suggest development of a project similar to the Carthage museum.

Vitali leaves U of T with some regret, but moves toward her own future with optimism: "A lot is luck, the people you meet, the adventures you find. One has to have courage, I think, but it's an exciting world and I'm grateful to Ursula for opening the door; it would be crazy not to step out and do. Someone said to me that I'm poor but rich in experience. I don't mind. If knowing is important, then life has been kind to me."