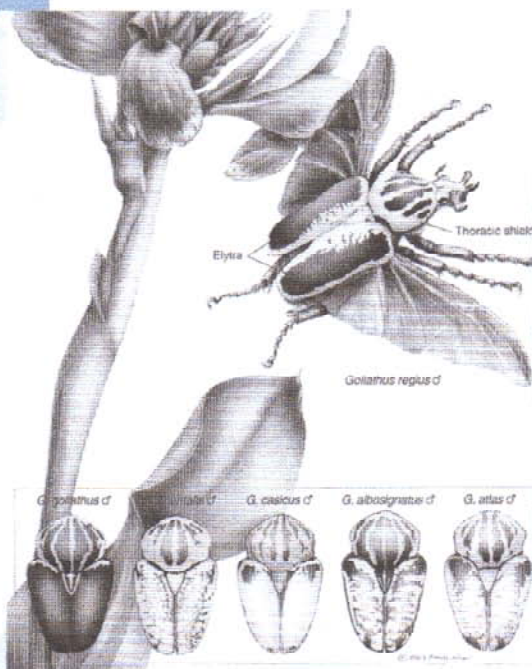


Emily Shaw '94

Medical Illustrator, 3-D Modeler/Animator

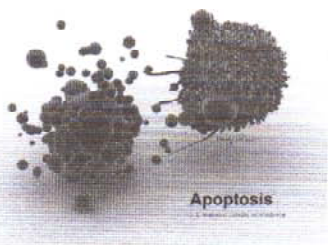
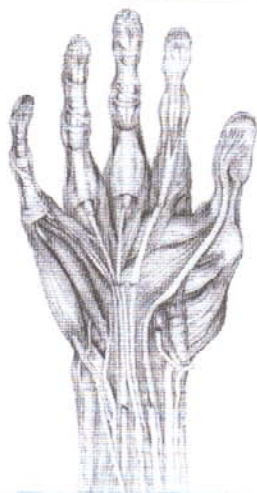


Emily Shaw '94 was in the midst of her studies at Johns Hopkins University two years ago, when she received an urgent page from the Baltimore Aquarium. Four sea dragons had died in captivity – a trend that veterinarians were at a loss to explain. Shaw rushed over to retrieve the specimens, took them back to her studio, and proceeded to make biological history. After dissecting the sea dragons, she produced the world's first illustration of sea dragon anatomy – a critical step toward understanding the animal's demise. Her drawing is now referenced by marine biologists and veterinarians at both the Baltimore Aquarium and the Marine Biology Center at the University of Maryland College Park.

"I love the fact that I can take my artistic training and do something incredibly useful," said Shaw, who completed a master's degree in medical and biological illustration at Johns Hopkins Medical School in 2003. "Creating scientific illustrations is like being a visual teacher. It's my job to simplify complex information so it can be grasped and understood by a broad audience."

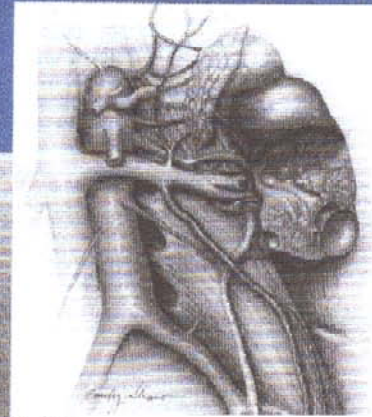
Shaw is now a full-time medical illustrator, 3-D animator, and product education specialist at Laerdal DC, a Washington D.C. branch of an international company based in Norway. Laerdal is best known for its CPR training mannequins such as "Resussi Annic."

The first inkling that she would make a career out of her drawing talent and her interest in biology occurred at CSW, according to Shaw. Specifically, she remembers coming home one day from **Marilyn DeIDonno's** zoology class.



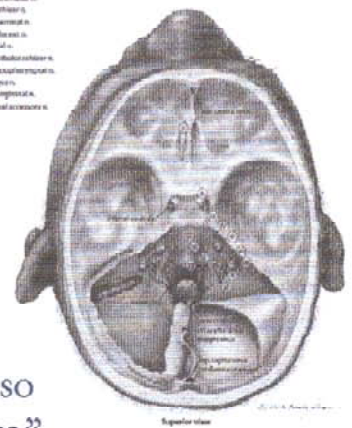


Sea dragon illustration



Genital Nerves

- I. Uterus
- II. Ovary
- III. Fallopian Tube
- IV. Vagina
- V. Cervix
- VI. Bladder
- VII. Uterus
- VIII. Vagina
- IX. Cervix
- X. Uterus
- XI. Vagina
- XII. Cervix



Superior view

“Creating scientific illustrations is like being a visual teacher. It’s my job to simplify complex information so it can be grasped and understood by a broad audience.”

“I had done an intricate drawing of an earthworm and all its organs, and when my dad saw it he perked up and mentioned the term *scientific illustration*,” recalled Shaw. “That definitely sparked something in me.”

Several other CSW science courses steered her toward that goal, said Shaw. **Adele Rustino’s** botany class gave Shaw an in-depth exposure to botanical illustration. And the integrated science and art trip to Costa Rica inspired Shaw to keep an elaborate sketch journal of native animals and plant life.

At the same time, she was immersing herself in CSW’s visual art courses.

“**Tom Evans** was my fine art inspiration,” said Shaw, who pursued a BFA at the Maryland Institute College of Art before going on to Johns Hopkins. “I spent a lot of time and focus on figurative sculpture, and he gave me a lot of attention and critical feedback. He supported me in everything I did.”

The creative decision-making skills Shaw gained from her art classes, both at CSW and at MICA, are critical to her work now.

“Illustration is a kind of fine art in and of itself. You must go in and make creative decisions about angle, and what to emphasize and highlight, depending on what information must be conveyed,” explained Shaw. “I am usually working from very pale, washed out, preserved organs, so I emphasize things with color, and saturate things so they pop out. Anatomy is a highly

intricate architecture of structures, and it’s my job to isolate the key elements that need to be taught. I have to remain accurate, but I do have a lot of creative liberty.”

Most recently, Shaw has taken her medical illustration into the digital realm. At Laerdal, she works with a team of biomedical engineers and anatomical specialists to create software and hardware that recreate realistic medical procedures. The software allows medical students and clinicians to practice medical procedures without risk to real patients.

In a recent project, Shaw helped create nineteen, three-dimensional, digital models of babies, based on real infants brought to the studio. The anatomically correct baby-models have veins, muscles, nerves, arteries, organs, a skeleton, and a unique skin, and will help train medical students how to correctly insert I.V.s into infants.

“In a way, I feel like my artistic training is helping to save lives,” said Shaw. “This type of real-life simulation means healthcare providers are already acting and thinking like experts from the very first moment they have contact with a patient.”

In addition to her full-time job, Shaw runs her own medical illustration company, Illustrating Medicine, (www.illustratingmedicine.com), with a list of clients that includes The National Institutes of Health, The Federation of American Scientists, and her alma mater, Johns Hopkins University.