

The Secret Lives of Butterflies



Documentary Biographies

Penny McCann, Director

Penny McCann's work ranges from dramatic shorts (*The Sisters, Helpless, The Professor and the Blind Girl*), experimental films and videos (*Marshlands, Lot 22 Concession 5, Crashing Skies*), and television documentaries (*Secret Secretaries* and *The Secret Lives of Butterflies*). Her award-winning work has been aired on CBC, WTN, SCN, Discovery Channel, TV5, Knowledge Network and PBS, and has been exhibited at festivals nationally and internationally. Penny lives and works in Ottawa where she is currently the Director of SAW Video Media Art Centre.

Ed Kucerak, Producer

Ed Kucerak has had an extensive career in the film and television industry spans more than two decades. Founder of Kublacom Pictures, Ed has produced and directed documentaries for a variety of Canadian and U.S. broadcasters. Several of his films including, *Partners for Peace, How Can a Boy, This is My Witness, One of the Last*, and *The Secret Lives of Butterflies* have been screened in Canadian and international film festivals.

Hoda Elatawi, Producer

Hoda Elatawi, Vice-President, GAPC Entertainment, has been producing award-winning films and television in Canada and internationally for over two decades. Hoda's passion for history, social issues, education, and the arts has united her with like-minded producers and writers from around the world and allowed her to work on a diverse range of television projects. From doc series to biopics, from specials, children's programming to unscripted dramas, she brings a depth and unique perspective to all that she produces. Recently, Hoda completed Season 2 of an award-winning children's television series, *The Prime Radicals*, for TVOKids, and is currently in production on a social issue doc for the Documentary Channel — this latter will be her directorial debut.

The Secret Lives of Butterflies was produced by Kublacom Pictures and GAPC Entertainment. The film is also available in a French version under the title *La vie secrète des papillons*.

Length: 46 minutes

Production Year: 2007

www.kublacom.ca

<http://www.gapcentertainment.com/>

ACKNOWLEDGEMENT

This study guide was produced with the support of the DOCS IN CLASS initiative in collaboration with Curriculum Services Canada. DOCS IN CLASS is led by the Documentary Organization of Canada, Toronto Chapter and made possible with the support of the Ontario Media Development Corporation on behalf of the Ministry of Tourism, Culture, and Sport.



The Secret Life of Butterflies

Potential Audience

Grades 9 - 12

Subjects/Disciplines Connections

Science, The Arts,
Literature Studies

Butterflies are unquestionably the most colourful creatures on earth. Their magic is largely a secret one. *The Secret Life of Butterflies* captures the splendour of these fleeting insects, exploring new realms of biology and ecology which have been, until recently, largely undiscovered. The film also examines society's cultural and sociological obsession with these winged wonders. It effectively presents the many facets of these creatures of nature, blending factual science with art and culture.

FOCUS FOR LEARNING Environment, Stewardship, Cultural Symbols, Myths, Legends, Stories

KEY UNDERSTANDINGS

- Sustainability of a species depends on its physical and physiological adaptations over time.
- The human connection with butterflies is expressed through "iconic images" in culture, art, and literature.

There are two foci presented for using the film – one for science and one for iconic images in culture, art, and literature.



Background

The Secret Lives of Butterflies explores new realms of biology and ecology, which have been, until now, largely undiscovered. The documentary explores state-of-the-art biology using in-camera techniques and technology to capture the subject in a manner never before seen anywhere.

Viewers witness the amazing annual migration of the monarch butterfly to Mexico; the mourning cloak butterfly's aerial dog fight in its quest to win mating territories in the heart of winter; and the chemistry-laden, aphroditous mating ritual of the male and female butterfly.

Few of us realize that tens of millions of years of evolution have shaped the behaviour of the 20,000 species of butterflies in amazing ways. When we see a butterfly flying through a meadow, we assume that its activity is random. Few would imagine that a female butterfly laying her eggs must navigate a toxic minefield. Many of the poisons and medicines known to mankind, such as nicotine, morphine, caffeine, cyanide, quinine, cocaine, codeine, aspirin, are the product of plants' defense against the larvae of butterflies and other insects. Before laying her eggs on a leaf, a female butterfly must do a chemical analysis of the plant more precise than that possible with a spectrophotograph.

As for larvae, they too face many challenges. They are subject to tremendous evolutionary pressures to avoid predators. In fact, 99.5% of caterpillars, which hatch, will not survive to become butterflies. Consequently, some weird and wonderful behaviours have evolved.

The film also explores people's fascination with butterflies, the hold they have on the imagination, and the human love these creatures engender. This fascination transcends cultures, environments, and time periods.

Science Focus

Before Viewing

- Pose the question: What makes a good science documentary?
- Record student responses (e.g., target audience, interesting, presentation style).
- Tell students that this documentary links culture with science to present information about butterflies.
- As a class, discuss what they know about butterflies and list their responses under the headings: Science or Culture.

During Viewing

- As they view the documentary, students record three facts about butterflies that they have learned from the film.
- Students also think about how the film maker portrays the results of scientific investigation in a creative and artistic way.

Guiding Questions

Who will enjoy watching this film?

What makes this film interesting?

How did the film makers balance science with non-science information?

After Viewing

- In triads, students share and analyze the facts they recorded during viewing, considering how the fact is related to Science, Technology, Society, or the Environment and prepare a summary.
- Students share their summary with another group, and compare the similarities and differences in the collection of facts. The triads create 1 – 2 questions to indicate what more they would like to learn about butterflies.

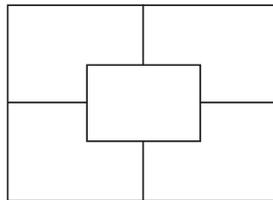
Applying the Learning

- As a class, students discuss how the film maker used science and non-science information in the presentation of the butterfly. They share facts and elements from the film that they found most interesting.
- Students plan what further research they need to do to answer the questions they generated about butterflies.
- Using this documentary as a model, they decide how they will present their research. They design a storyboard and produce a short media presentation of their research to share with the class.

Iconic Images Focus

Before Viewing

- Explain that butterflies have fascinated people through the ages and are represented in a variety of ways in many cultures.
- Students work in groups of four to complete a Placemat organizer in which they identify representations of butterflies in art, music/dance, literature and culture. As the groups share examples, they add to their Placemat.



During Viewing

- As students view the film, they look for other representations of butterflies and are prepared to talk about one of the examples that intrigued them.

Guiding Questions

How is the butterfly used as an icon or symbol in the example you chose?

Why was it chosen as the symbol?

Why do you think the butterfly has been used as a symbol in many different human activities?

After Viewing

- In a class share, students discuss the examples they have chosen and how the film maker has used the iconic representations of butterflies to link to the study of butterflies in science.

Applying the Learning

- Students decide on one example from the class share that they would like to explore further. They present their new learning using a format that will interest and engage an audience (e.g., a live or media presentation, a literature piece).