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Jana Juráňová Babeta Explores the World *A Piece of Book for Girls*

About Animals - This Time Differently

Babeta was so struck by the idea of saving animals that she started to examine who has already done that before. And she found two role models right away:

Joy Adamson. She was born in 1910 in Austria and died in 1980 in Kenya. When a lioness attacked her husband and he had to kill her in self-defense she left behind three orphaned cubs. Joy brought them home. She placed two of them in a ZOO and she kept the remaining one. The third cub was the famous Elsa the Lioness about whom Joy Adams wrote a book. When she brought Elsa up she returned her to the wilderness and Elsa indeed found her new home there. A film based on the book was made and from its profit Joy Adamson established a foundation named after Elsa to provide money to save wild animals so that they could live in the wilderness. Later, Joy Adamson was saving not only lions but also leopards and cheetahs.

The other one was **Jane Goodall** who was born in 1935. She lived in Africa and studied the life of chimpanzees. She taught others to treat animals, as well as people, with respect. She was convinced that scientific experiments conducted on chimpanzees were very cruel. She protested against locking up chimpanzees in cages in ZOOs where they had to spend most of their lives imprisoned and in loneliness.

And Babeta is exploring further. It's not easy because there are so few women in her favorite encyclopedias. Sometimes there is none. But still, she did find somebody there: Marie Sklodowska Curie. And she is exploring further. Daddy who has come to terms with the fact that Babeta is the way she is lets her use his computer and surf on the Internet. And Babeta is surfing, browsing, flying and wandering. There is much more stuff about Madam Curie on the Internet than in the encyclopedia. And there are also many things about other womenscientists there.

Maria Mitchell lived between 1818 and 1889. She discovered a comet and became one of the first female professors of astronomy. She was the first person in the United States to photograph the surface of the Sun.

Babeta is very excited about this exploration of the world. She has found so much! She decided to put together her own encyclopedia. It will be an encyclopedia of famous women. But not famous in just any way - it will contain no super models. It will only contain those women who became famous because of their brains.

Babeta is collecting data about female chemists, physicists, astronomers, archeologists, pilots. She even found the first Slovak female pilot.

Ľudmila Šapošniková–Aujeská. She was born in 1906 and died in 1985. In 1930 she passed the pilot test and from then until the beginning of the WWII she flew airplanes.

Babeta is flying on the internet like she was flying an airplane observing the terrain underneath her – there are so many new things there.

Astronomer **Carline Herschel** lived between 1750 and 1848. She discovered eight comets and some nebulas. She was the sister of the astronomer William Herschel for whom she first just cut lenses. As a girl she couldn't get proper education. She never married because as a child she was ill with typhus and never grew up. But her brother supported her and she became a world known astronomer.

This is what Caroline told us about herself:

You were born in 1750 in Hanover in a family of a worker. How did you get to discovering comets?

That's a long story. To provide for his family my father Isaak Herschel worked as a gardener. We were six children. But he was also a very talented musician. Thanks to his talent he got a very good job as a bandmaster in the Prussian army.

What did your mother say about it?

She didn't mind what the boys were doing. But when it came to me, she was angry with my father who occupied me with "those useless things." She wanted me to become a hardworking housewife. But my father secretly supported me in my studies.

How did your education continue then?

My life got a strange twist when as a ten-year-old I fell ill with typhus. I got over it but I stopped growing. I wasn't taller than 130 cm. I was very tiny. My father advised me never to marry and to live a single life. He was afraid that nobody would find me attractive enough to want to marry me.

You were never married?

No, never. I don't know whether it was because I was so small or because I didn't even think about marriage. But I had many friends, even admirers – sometimes I found it funny. Later, when I was thinking about it I realized that my life as a married woman would hardly have been interesting.

Girls are not afraid of mice

Babeta was watching a TV music chart. The lyrics of one song were: *You needn't be a gray mouse when you can be a miss.* The song had a video clip featuring a girl who was alternately a gray mouse (wearing glasses) and a miss (who very much looked like a Barbie doll). Babeta

realized that she likes mice – and not only those living ones. She also likes her computer mouse.

Girls are afraid of mice only when they mothers tell them they should be afraid – that when they see something running on the floor they should jump up on a table even with their shoes on - although otherwise it is bad manners for a girl to jump up on a table with her shoes on. But a girl can jump up on a table when she sees a mouse running nearby. Not only she can – she is obliged to – if she is a well-brought-up girl. And then, when she is standing on the table, everybody will make fun of her. So, mice are here so that girls can jump up on tables when they see them – otherwise there would be nothing to laugh about. Babeta has never been afraid of any mouse. But her brothers feared them a lot. That's the way it goes – some are afraid and some are not. That's normal.

In fact, Babeta liked mice. For some time she had two white mice in a glass jar. And when her teacher told them to make up a fairy tale, Babeta decided that in her fairy tale nobody will get married. And she thought up a fairytale about a mouse that climbed out of a jar because she couldn't sleep.

So: once upon a time there was a mouse. And it was a cheeky mouse. She climbed up on table and started making mess. Everything was silent. And she was running around on the table looking for something to eat - something like Jerry who accidentally is not being chased by Tom. Babeta was woken up by that sound and what does she see? A mouse on the table! First she wanted to turn into a cat and catch her. But then she though about something better. She turned the ordinary white mouse into a computer mouse. The mouse stopped messing around and was even useful. And a proper girl is not afraid of mice. A proper girl grabs the mouse, tames her and turns her into her helper.

Girls Who Invented the Computer

Babeta further searched the internet. She was looking for girls who were not afraid of mice and who didn't want to be beauty queens. She found many of them, and not only that. She found a clue: inventors of the computer were women. She followed the clue and it brought her to Ada Byron known as Lady Lovelace. She was born in 1815 and died when she was 35 just like her father, the poet Lord Byron. Ada didn't live with her father, but with her mother who asked for separation from her husband only a few weeks after Ada had been born. Her mother supported Ada's interest in natural sciences. When Ada was nineteen she met the famous constructor of a computing machine Charles Babbage. Babbage was still working on the machine and he asked what would happen if the machine could not only anticipate but also do various operations. Ada was struck by these ideas. Later, as Lady Lovelace and a mother of three children, she exchanged letters with Babbage filled with fantasies about the new machine that would be able to, for instance, compose music, draw pictures and could be used for many practical and scientific purposes. Ada Lovelace suggested to Babbage how the computing machine could work with numbers. This computing plan can be now regarded as the first "computer program". One software language was named after Ada Byron-Lovelace as a tribute to her, and in her honor an award is given to female computer experts.

Grace Murray Hopper, the programmer who laid the foundations of computer software: She created the computer language called COBOL that is still in use, and that has helped scientists and other experts to better use the computer. She created the whole computer system for the US Navy and became the first female admiral. One time, when one of the computers broke

down she noticed there was a moth inside it. She took it out with a pair of tweezers and said: "It's a bug". Since then we use the word "bug" when speaking about computer problems.

Other Computer Women

Programmers who during WW II worked in the USA on the computer system ENIAC: Marlyn Meltzer, Kay McNulty, Betty Snyder, Ruth Lichterman, Frances Bilas, Jean Bartik and many others.

We spoke with Marlyn Meltzer:

You are one of six women who stood at the birth of computer programming more than fifty years ago. The fact that women stood at the beginning of computer programming is rather surprising. Even these days, computer science is still considered to be a men's domain.

One of the first people who even started thinking about how the computer could be created was Augusta Ada Byron-Lovelace, a daughter of the famous poet. She was an excellent mathematician and she developed basic programming ideas already in the first half of the 19th century.

How did you get to working with computers?

It was in 1942. The Allies were under siege in all parts of the world and the American Army was facing a specific problem – trajectories. In order for the artillery to hit their targets they needed special grids with data on every variable. Since many men who could do this work were fighting in the war, the Army started to hire female mathematicians. I was hired because I knew how to work with the computing machine. But there were many other women too.

Can you tell us some other names?

One of the first was Kay McNulty. At that time she was twenty one. The other was Betty Snyder whose grandfather and father were mathematicians and she was determined to follow in their footsteps. It was ironic that when she was in her first year in college in Pennsylvania, her professor told her she should have stayed at home to take care of children.

When did you finish the computer?

ENIAC was officially introduced on the 14th of February 1946. It was a great celebration. In front of the press and to the tones of a military band we as programmers were putting punch cards into a tabulator. In the course of twenty minutes the machine produced a sheet filled with computations. The next day it was in all newspapers all around the country. ENIAC surpassed all computing machines known until that day. In a few hours or minutes it could make as many computations as a single person would make in her whole life. Mathematicians and scientists could suddenly deal with a completely new kind of issues: from calculations of air circulation to the detonator of the hydrogen bomb.

Where you there when mathematicians and scientists started to deal with a completely new kind of issues?

I wasn't. I got married; stopped working and later I helped my husband to run his dentist office. But Lichterman, Bilas, and McNulty helped to train the new generation. Later they also got married. McNulty married Mauchly, the co-creator of ENIAC, but neither she nor Lichterman or Bilas ever got back to their work as programmers. By getting married they

changed their names, they got lost. Jean Bartik and Betty Snyder also got married but they stayed in the world of computers. Betty Snyder, later known as Holberton, 1997 won the annually granted Augusta Ada Byron-Lovelace Award. It was she who had been told by her college professor to have better stayed at home to take care of children. Bartik worked on new types of computers and in 1951 left to take care of her family. She resumed her career in 1967.

We also spoke with the programmer Jean Bartik

What did you do after you finished ENIAC?

I was still working on ENIAC and helped to transform it into the machine with a program stored in the memory of the computer. Then I joined the Eckert-Mauchly Company and helped to program BINAC. It was a predecessor of modern computers for general use, i.e. of UNIVAC I.

Have you devoted all you life to computers?

I haven't. In 1951 I interrupted my career and stayed at home with my children. I returned to full-time work only in 1967. For nine years I worked as a publisher. We followed newest technological developments. Later I was a marketing manager for various companies, e.g. Systems Engineering Laboratories. I managed minicomputer marketing.

You comeback was quite a matter of course. After all, you were one of the ENIAC pioneers.

Not at all. My comeback was not as smooth as it could have seemed. When in 1978 I worked for the Honeywell Company they told me I was too aggressive, eloquent and clumsy in relating to people.

Was that because you were a woman?

Well, with my temper I wouldn't have made a great carrier even as a man. But the truth is that for a woman it was even harder. Everybody expects that a woman will be sociable and that she will agree with everything...But if at that time I had agreed with everything, the computer probably wouldn't have come to existence.

Hobbies

Babeta carried on working on the encyclopedia. Some people collect post stamps; some collect stickers. Some people have albums with actors and singers. Babeta has an album with female scientists, writers, painters, composers. The album – encyclopedia was growing bigger.

Babeta's friend Hana has an herbarium with dried pressed plants. They are beautiful and some have a strange fragrance. Hana is also fascinated by insects, butterflies and other vermin. She would like to collect them too. But it's not easy to collect dead bugs. How often does one come across a dead bug? Usually the don't last too long. And Hana and Babeta think that killing them is cruel. Indeed, it is cruel. In a natural history museum they saw butterflies pinned in framed boxed and dead bugs under a glass display. Hana very much liked the fact that Babeta had her encyclopedia of female scientists and artists and she was curious if there

also is any "bug scientist" – entomologist. What an awful word, but one can get accustomed to it. Babeta had to admit that no such person was in her encyclopedia, and so she started to search. And she did find someone.

Maria Sybilla Merian

She was born and lived in Germany in 1647-1717. She was a painter and scientist. She painted and wrote books about plants and insects. Already as a small girl she liked to study insects. Her stepfather who painted flowers and insects sparked her interest. Maria learned to paint from him. She painted with water and oil colors. She painted birds, insects, spiders, caterpillars, ants. As a young woman she wrote several books about insect. Her illustrations were so realistic that scientists used them for their work. Maria got married, but that was not her life's happy ending. After twenty years of marriage she divorced her husband and at the age of 52 she traveled, together with one of her two daughters, to the northern part of South America. There she lived on the savannas of Surinam. Maria painted birds, insects and plants. She was very interested in the life cycle of insect. She closely observed various kinds of insects and then painted different stages of their life cycle. After having returned to Europe she lived in Amsterdam. Six plants, nine butterflies and two beetles are named after her.

Women – Pirates

Babeta had an argument with the boys because she claimed that women could do anything – anything that men do, even more. And the boys claimed that women could never be pirates. But why couldn't they? And Babeta found out there had been women pirates. One of them was called Mary Read and the other one was Anne Bonny. Both were English. Babeta found Mary Read's biography and she can't stop reading it. Now she's facing a problem – is the Mary Read's story going to change into a love story of the kind her sister Zuzana reads? Zuzana gobbles them down. She goes to a library and Babeta has noticed that that sometimes Zuzana reads some of the stories because she forgot she has already read them. She also buys them in a newsstand and all of them have pink covers.

Mary Read was born in London. Her mother brought her up as a boy. Since her childhood, Mary Read was leading a very adventurous life. While still a child (she could have been about 15), she joined a battle ship crew. A few years later she left the ship and joined an infantry platoon. She fought in Flanders and she showed valor in combat. Later she joined a cavalry. There she fell in love with one soldier. Babeta wants to learn about Mary Read as much as possible, but she doesn't want to read a love story. So she sighs, but she tries it anyway– if it turns out to be a love story she can always leave it.

Mary Read married the soldier she had fallen in love with. Babeta read this information and found out that the book about Mary Read does not end here. It means that it is not going to turn into a love story. If that was so, Babeta would have to weed through many twists of the story, trails and tribulations of the heroine and it would all end with a wedding. But here, the wedding is only mentioned and the story goes on.

Babeta's mother and father got married when they had fallen in love with each other. The wedding was just the beginning. If everything had ended with their wedding, Babeta, her sister Zuzana or her brothers would have never been part of their story.

So Mary Read is married. Together with the husband they opened an inn named The Three Horseshoes. After some time, Mary's husband died. How many lives did Mary Read lead? Mary lived as a woman and Mary lived as a man. She alternated that. When her husband died she again disguised as a man. She tried to become a soldier again, but she didn't succeed so she boarded a ship headed for the West Indies. Her ship was captured by captain Calico Rackham. He was a pirate. On his ship there already was one woman – the pirate Ann Bonny.

Ann fancied Mary. She thought Mary was a man. She almost fell in love with Mary, but one day she saw Mary washing herself and she noticed her breasts.

Babeta is thinking about how a woman can fall in love with another woman when she thinks the other woman is a man. She is picturing her girlfriends dressed as boys, thinking whether she would like them. But she knows they are girl. But what if she didn't know? Maybe she would rather fall in love with them than with real boys. Girls don't use curse words, spit, and laugh like a pack of hungry hyenas, and boys do all of theses, although not all of them. Only sometimes they pretend they have manners to impress the girls, but next time they are even ruder trying to embarrass them. But these days, one doesn't have to cross dress; only if one wanted. And some girls fall in love with other girls. So what?

And the story goes on. Mary swears she'd rather join the pirates than to lead a dull and boring life as a woman. And so she becomes a pirate. She joins her life with another woman-pirate Ann Bonny and the pirates.

Babeta is thinking about what kind of life women lead. Is it dull and boring? What will her life be like? Gee, it can't be that bad these days, can it? These days girls don't have to disguise as boys. Babeta likes to wear trousers – jeans or shorts. But still, things won't be as easy when boys think women pirates never existed.

Babeta delves again into the story of the woman pirate, actually – two women pirates. She found an old, very old book; some pages are so worn out she can hardly read the letters. There we have a yet another love story. It is strange. In one book there is usually just one of them. But is also true that although Babeta is only eleven she has been in love for several times already. So, a few stories could be written about her. Or one story with a few loves: her music theory teacher, her six years older cousin, the boy next door...

Meanwhile, Mary Read is living her second love story. And Babeta is reading on. Captain Calico captured another ship and the pirates were joined by a young sailor who became a pirate and Mary fell in love with him. But the young sailor insulted an old seasoned pirate who had been on the ship for a long time and the older pirate challenged him to a duel. Mary knew her sweetheart stood no chance against him so she too started a quarrel with that old pirate. She offended him and challenged him to a duel to defeat him before he could kill her lover. They were to fight with pistols and cutlasses. Both missed with their pistols. Then they started to fight with cutlasses. The sailor was stronger but Mary was more flexible. The duel was going on for some time already when Mary pulled out a trick: only very few sailors knew they she and Ann were women. They were disguised as men. So, in one moment Mary ripped her shirt opened and revealed her breasts. Mary took advantage of that moment of surprise and cut off his head. So, her lover didn't have to fight with him. Then they got married.

What is the ending of this story? Is it another wedding? What do pirate stories usually end with? All were captured and sentence to death. But Mary and Ann were set free. They saved

their skins. In front of the judge they stuck out their bellies (claimed to be pregnant) and as nobody would execute a pregnant woman they were acquitted. But neither of them was pregnant. And they didn't give birth to babies. It is possible to stick out one's belly even when one has eaten a lot. Babeta knows that. Don't eat so much or else you won't get married – her uncle told her at her grandpa's birthday celebration. If only has she known the story about the women pirates then! Just eat as much as you can, one of these days it may come in handy!