

## An Amazing New Canadian \$100 Bill

The Bank of Canada unveiled its innovative new \$100 bill on Monday, November 14, 2011.

The new bill is designed to confound counterfeiters: during the last 12 month period 470 counterfeit notes in 1 million in circulation have been detected. The new bills should not only reduce this figure considerably, they will also outlast the traditional cotton-paper ones by a factor of 2.5 and cost less to produce, e.g. 10 cents versus 19 for the old bills (by contrast the Canadian copper penny (cent) is said to cost between 0.8 and 1.6 c to produce, depending on whom you ask!).

The security features of the new polymer bill are outstanding:

The material is a durable polymer that does not suffer from moisture, heat, cold, or folding.

The bill has 2 see-through windows with intricate hologrammes that change colour as reflected lights hits them. A bank counter code, braille tactile lettering for the blind, and elaborate printing make it a universally useable bill. The colour theme remains the same.

More polymer notes will be issued in future: a \$50 (red) in May 2012, a \$20 (green), a \$10, and a \$ 5 in late 2013.

On the obverse side the new bill features Sir Robert Laird Borden, Canadian Prime Minister from 1911-1920, on the reverse side – and that is what makes it interesting for microscopists and justifies this article to be published here – it features a scientist seated at a modern microscope, plus a bottle of insulin, a DNA chain and an ECG graph, all of these to represent Canadian achievements in medicine: the invention of Insulin, the unravelling of the DNA, and Canadian contributions to heart health.

The microscope had me puzzled: on the one hand it looked very familiar, but certain features did not fit. I checked similar stands from Leica, Nikon, and Olympus, neither had a stand that came close, as far as I could find out. So I came back again to the Carl Zeiss 1995 Axioplan. You may compare the two illustrations. It seems to me that the illustrating artist made some minor changes in order not to be accused of promoting a certain make. Therefore the microscopic sleuth has to carefully compare certain betraying details in order to find out on what make and stand the artist based his design. One typical design feature of the Zeiss Axioplan is the T-shaped footprint and the slanted back, the “pyramid”. These features are very obvious in the bill’s illustration. The tubehead is stepped while in the original it is slanted, and the filter wheels are shown behind the focusing knobs instead of in front. You can really play: find the difference... Still, I may be wrong altogether.

That reminds me of the 1997 issue of a 200 Deutschmark banknote which showed on the obverse Dr. Paul Ehrlich, a famous German serologist (1854 – 1915), and on the reverse his microscope, a Zeiss Stand IV #3078 (That number is, of course, not apparent on the bill, but I have a note from another publication, that this was the microscope Dr. Ehrlich used).

Microscopes have appeared on other banknotes (Brazil) and like microscopes on stamps make a fine subject for study for microscopists interested in such trivia.

**Note:** The reproductions of the new bill are used with the permission of the Bank of Canada

Fritz Schulze  
Vineland, ON, Canada

Email author, Fritz Schulze: [glenelly AT sympatico DOT ca](mailto:glenelly AT sympatico DOT ca)  
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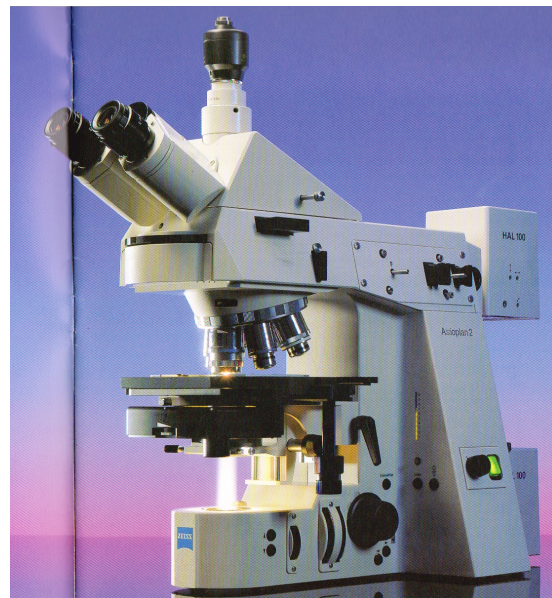
Obverse side



Reverse side



Scientist with microscope



Carl Zeiss Axioplan 2 (1995)

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