FORENSIC PHILATELY IN 2020 ~ CHALLENGES & OPPORTUNITIES

IAP SYMPOSIUM, LONDON: 14 OCTOBER 2017

Professor Paul Leonard BSc. (Hons.), CSci., FRPSL

THE KEY ASPECTS OF MY PRESENTATION

- Current knowledge
- The work of the Expert Committee
- Forensic Philately in 2020 ~ Challenges & Opportunities
- Conclusions
- Questions

Current Knowledge: First & Second International Symposium on Analytical Methods in Philately David Beech & Bob Odenweller

- ✓Forensic Examinations may add value to personal knowledge
- ✓Magnifying glasses x3 & x 10, tweezers, a perforation gauge and watermark fluid.
- ✓A comprehensive philatelic library
- ✓Microscopes, ultraviolet lamps , photographs.
- ✓Within the last fifty years, the potential for using beta radiation to determine watermarks on postal stationery
- ✓Analysis by X – ray fluorescence (XRF), Fourier Infrared Spectrometry (FTIR) and Raman spectrometry

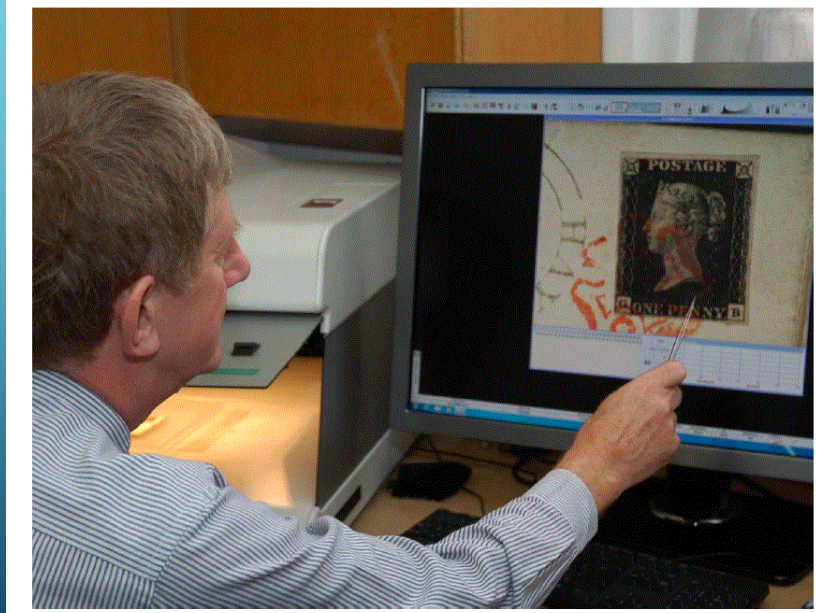
The work of the Expert Committee at the Royal Philatelic Society London

The submitted item is considered by a team of people, this will include recording what the owner has assessed the material to be. Analysis will often include comparison with previously submitted items from records held at the Royal Phiatelic Society London (RPSL), the Royal Philatelic Collection or British Library. Analysis may be aided by a video spectrometer comparator.

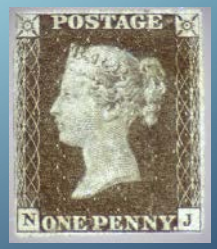
Colour ?

The work of the Expert Committee at the Royal Philatelic Society London

A video spectrometer comparator such as made by Foster Freeman (VSC6000) has been used for a wide range of forensic philatelic tasks e.g.



Used or unused?



The work of the Expert Committee at the Royal Philatelic Society London

The Foster Freeman VSC6000 has been used for a wide range of forensic philatelic tasks

The 1c British Guiana studied in 2014

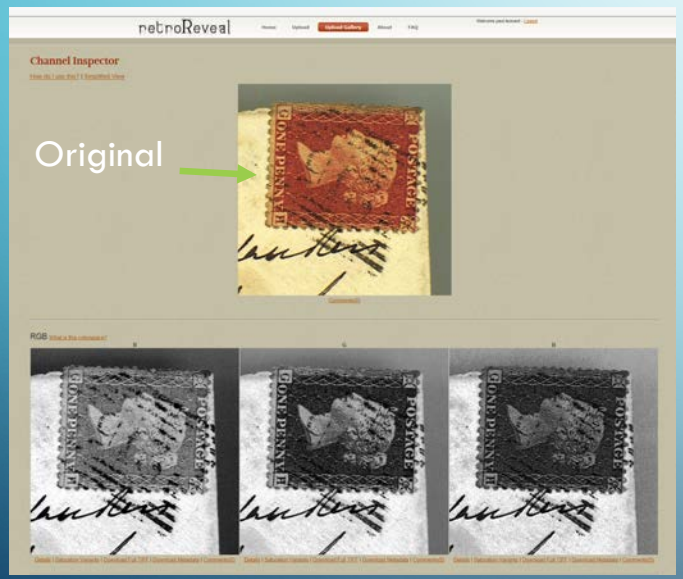
The work of the Expert Committee at the Royal Philatelic Society London

The Foster Freeman VSC6000 has been used for a wide range of forensic philatelic tasks

Identification of fiscal usage and removal

The work of the Expert Committee at the Royal Philatelic Society London

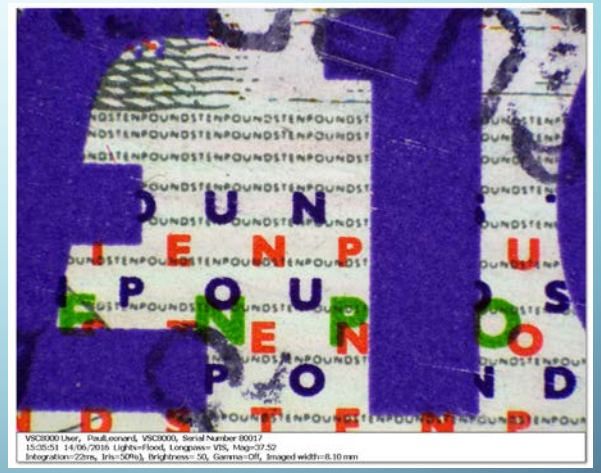
The Foster Freeman VSC6000 has been used for a wide range of forensic philatelic tasks & it is also possible to utilise the free programme from Retro reveal http://retroreveal.org/login



Identification of unclear cancellations

The work of the Expert Committee at the Royal Philatelic Society London

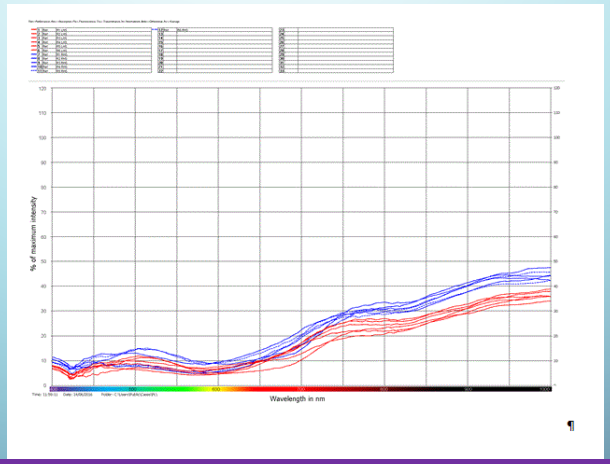
The Foster Freeman VSC6000 has been used for a wide range of forensic philatelic tasks

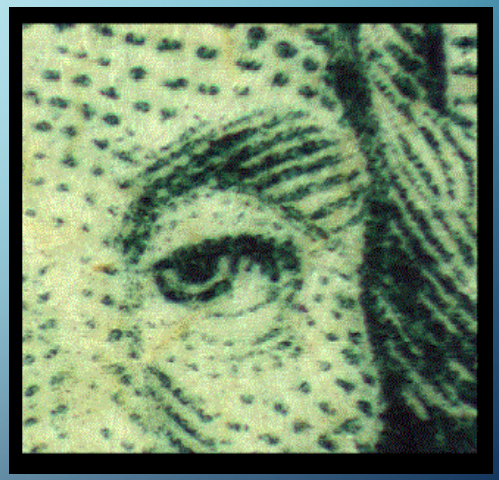


Identification of micro - writing on the GB £10

The work of the Expert Committee at the Royal Philatelic Society London

The Foster Freeman VSC8000 has been assessed at the ASQDE Pensacola meeting, 2016





USA SG1028 Liberty Issue 1c Washington deep green Used.
Several radings were taken from two stamps to study the response of the VSC8000. This has greater discrimination compared to the VSC6000 (3nm is better than 9nm.)

Forensic Philately in 2020 ~ Challenges & Opportunities

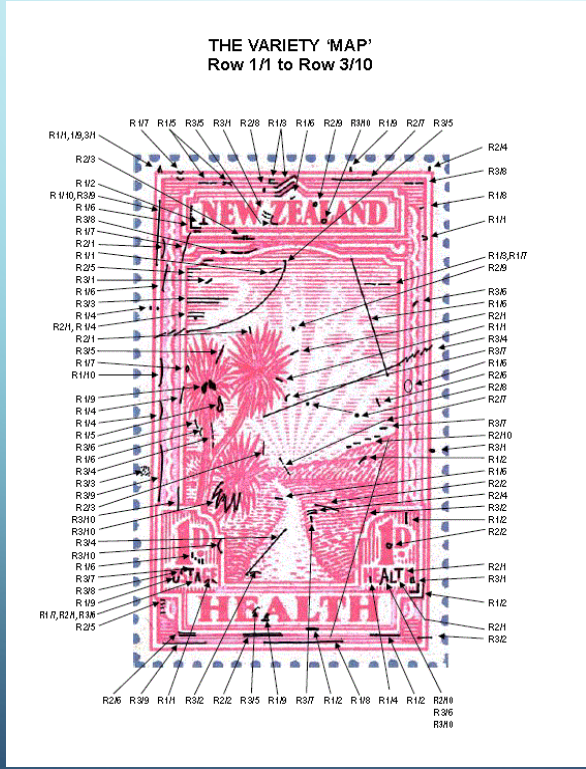
•Comparative analysis of stamps to detect varieties remains a challenge that can be assisted by computer based facilities.

Assessing the 1933 'Path to Health' printing.

This approach utilises the use of computer software to capture the images of individual stamps and overlay them to assess printing differences.

Forensic Philately in 2020 ~ Challenges & Opportunities

•Comparative analysis of stamps to detect varieties remains a challenge that can be assisted by computer based facilities.



Assessing the 1933 'Path to Health' printing Row 1/1 to Row 3/10

The Variety Map from the work by Terry Hancox in 2016 capturing the images of individual stamps and overlaying them to assess printing differences.

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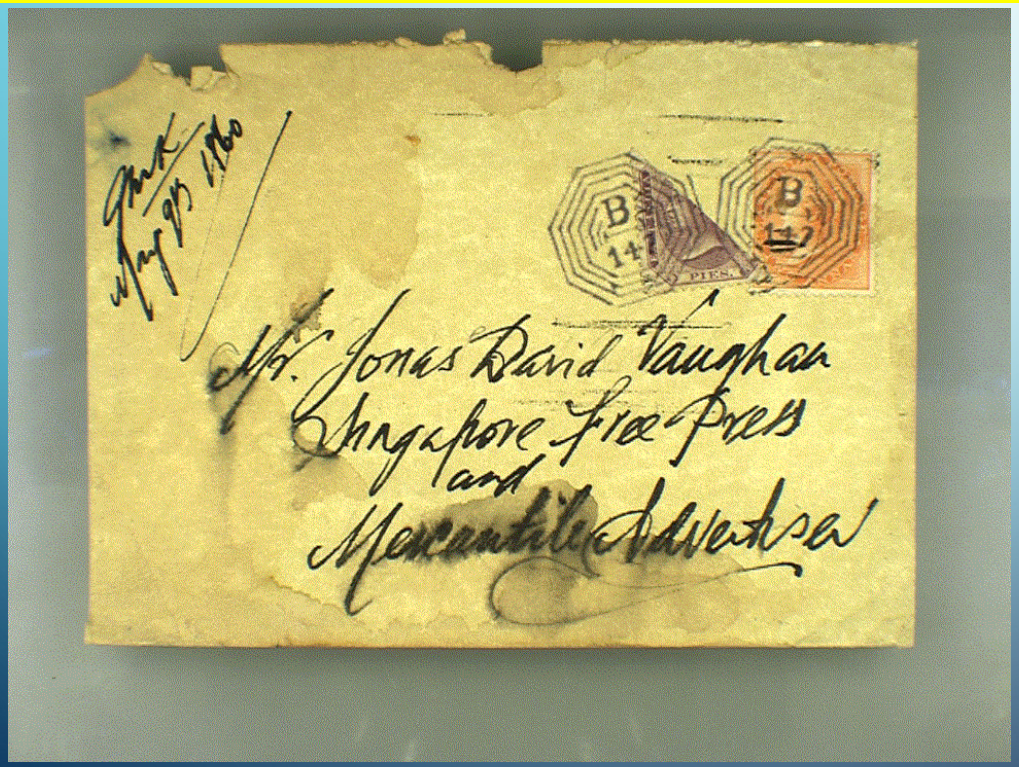
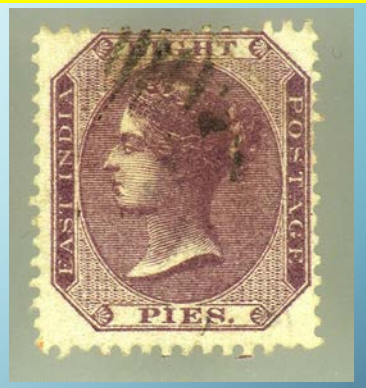
Forensic Philately in 2020 ~ Challenges & Opportunities

•Rates and routes with easily accessible stamps ~ the ability to fraudulently produce material ? Does technology make this possible & how can fraudulently material be identified?



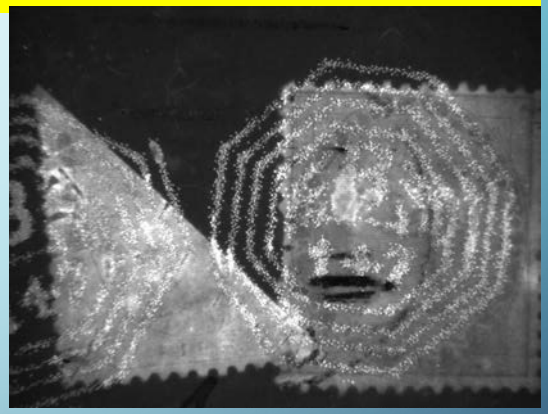


Perhaps 1860, 8p purple / whiteSG52 value c. 10$.

Bisected diagonally on cover (4p) value …. ?

Forensic Philately in 2020 ~ Challenges & Opportunities

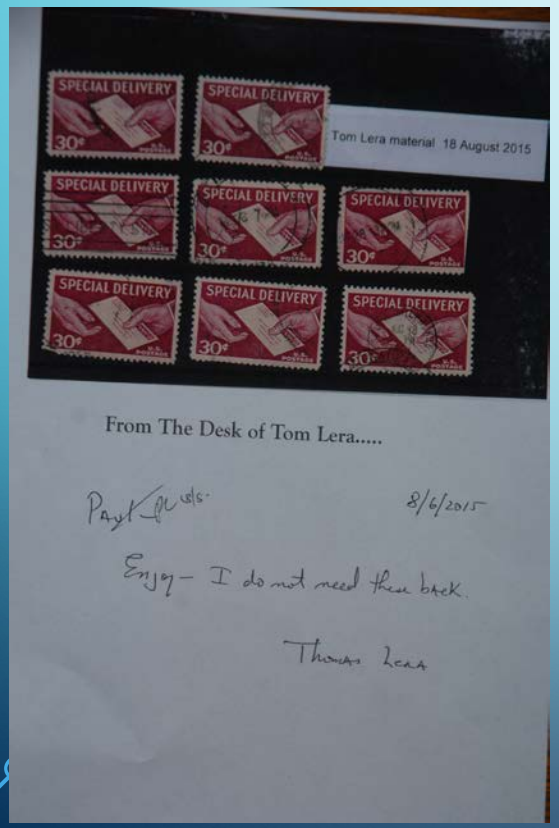
- Technology can produce fraudulently produce material, which can be detected with suitable analysis & knowledge.



Using the VSC6000 & 485 – 590 nm light source

Forensic Philately in 2020 ~ Challenges & Opportunities

- Unused stamps may command a premium ~ another way to fraudulently produce material ?



Using the soft-ware programme 'Photoshop' and lassoing

Forensic Philately in 2020 ~ Challenges & Opportunities

- Unused stamps may command a premium ~ the ability to fraudulently produce material ?

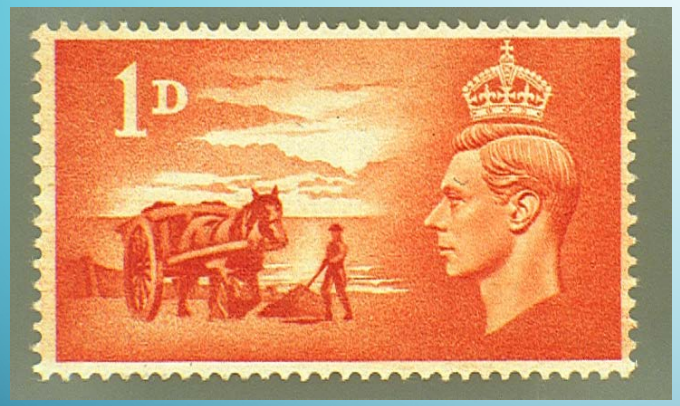
The 'unused' stamp produced from multiple used examples

It should be possible to identify laser or ink jet printings using magnified images

Details of this approach are discussed in the paper: Preliminary Study on Inkjet Classification Based on Satellite Droplet Distribution, ASQDE, 2017 by Joerg A. Greis

Forensic Philately in 2020 ~ Challenges & Opportunities

- Unused stamps may command a premium ~ the ability to fraudulently produce material ?



The ‘unused’ stamp

It may be possible to remove the printed image or the cancellation. In this example the stamp image has been removed but not the cancellation.

Forensic Philately in 2020 ~ Challenges & Opportunities

- Storing philatelic items ~ the ability to fraudulently produce material ?

Plastic wallets used e.g. in the 1970s may have been used to store philatelic material. In this example the pink colour of the hat has disappeared, perhaps due to inappropriate use of plastics to 'protect' stamps ?

Genuine

Forensic Philately in 2020 ~ Challenges & Opportunities

- Storing philatelic items ~ the ability to fraudulently produce material ?

Plastic wallets used e.g. in the 1970s may have been used to store philatelic material. The phosphor bands are easily seen.

Example from the Reference Collection at the Royal Philatelic Society London

Forensic Philately in 2020 ~ Challenges & Opportunities

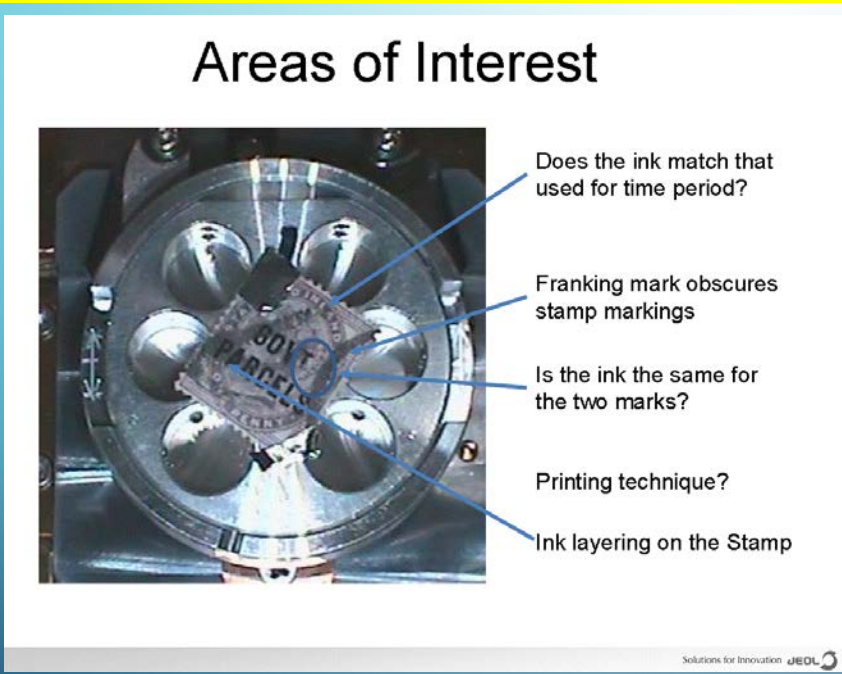
- Identifying fraudulently produced overprints

Using the VSC6000: The letters AT appear over the curved line which is part of the cancellation and hence added after postal use to produce a fraudulent item.

Stamps from Patiala, Indian Convention States from the Royal Philatelic Forgery Collection ~ a very useful source of information.

Forensic Philately in 2020 ~ Challenges & Opportunities

- Identifying fraudulently produced overprints

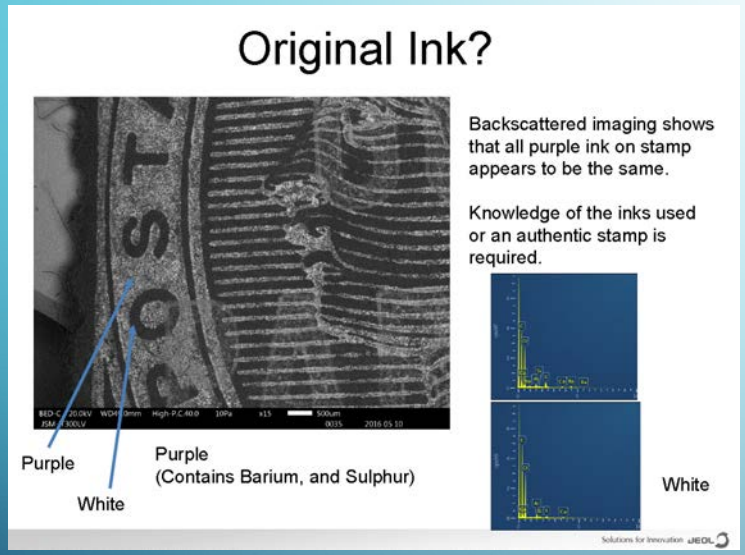


Scanning electron microscopes may be used for elemental analysis

A Joel Scanning Electron Microscope was used with a GB stamp overprinted GOVt PARCELS

Forensic Philately in 2020 ~ Challenges & Opportunities

- Identifying fraudulently produced overprints



Results from the JOEL SEM, which through elemental analysis may help determine forgeries

Joel Scanning Electron Microscope, similar to equipment used for forensic philatelic analysis

Forensic Philately in 2020 ~ Challenges & Opportunities

- Forensic philatelic research undertaken by The Royal Philatelic Society London

A Keyence 3D microscope

A reprint from the plate proof of the two pence (2D) Mauritius and a 3D - image from the 1847 Mauritius printing plate of 2D (left) and 1D (right) utilising a Keyence 3D microscope

Forensic Philately in 2020 ~ Challenges & Opportunities

- Forensic philatelic research undertaken by The Royal Philatelic Society London

Part of the printing plate and plate mark utilising the Keyence 3D microscope

Forensic Philately in 2020 ~ Challenges & Opportunities

- Forensic philatelic research ~ a visit to a Master Engraver

A Master Engraver at work, Paris November 2016

Example of an engraved plate and a printing

Forensic Philately in 2020 ~ Conclusions

•Conclusions (1)

As funds and priorities permit, the challenges for 2020 could include:

•the need to have international colour standards for unused and used philatelic material. This should include the suitability and availability of different types of equipment.

•chemical analysis of overprints, cancellations and stamps on or off a postally used item.

•the ability to merge data from different sources, utilising written records and reference materials. This could include plating which might be aided by computer – based algorithms.

Conclusions (2):

The potential for creating philatelic fraud creates many challenges for the experienced philatelist and the use of a wide variety of analytical techniques may aid a process towards expressing an opinion based on the evidence available.

Scientific analysis is constantly evolving and the ability to share material and data should lead to greater transparency of the process. Ideally, Expert Committees should be able to provide evidence of their opinion through co-operation.

Acknowledgements

I am grateful to all the members of the Expert Committee of the RPSL Ltd. for their advice and patience. Also to Gerald Bodily and Adrian Myer at the British Philatelic Association for their helpful discussion on the similar challenges faced during their expertising process. To Terry Hancox for his diligent and inspiring work on plating and permission to use two figures. To the equipment manufacturers such as Tom McCotter and Paul White at Foster Freeman for use of the VSC6000 & VSC8000 video spectrometers, Paul Whitford at Keyence for the use of their 3D microscope and Chris Dickinson at Joel for their scanning electron microscope. Also thanks to David Feldman for access to the Mauritius printing plate.

Questions?


ESTAMPILLAS
1976
RARAS Y FAMOSAS
1847
MAURICIO
"OFICINA DE CORREOS"
correo 3 cts
POSTAGE
POST OFFICE
MAURITIUS
ONE PENNY
NICARAGUA
LITO NACIONAL - PORTO - PORTUGAL