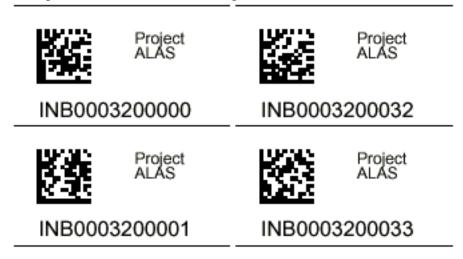# barcoding protocols, July 2012

Barcodes:

Barcodes are created using BarTender software. Labels are printed on 8.5x11 inch paper, using archival paper stock that we use for locality labels. Labels are printed using an Epson Stylus Photo R2880 inkjet printer, using the recommended Epson inks. Paper is Epson Ultra Premium Presentation Paper Matte. These materials are designed to have good archival properties for professional photographers. The software runs on Windows operating system. The Bartender software allows you to design almost any kind of label, with a wide variety of symbologies. For our labels we are using Datamatrix symbology. The labels are printed in rows and columns, 417 labels per page. Our individual labels are 14 x 7.5mm.

Example of 4 barcode labels, enlarged:

We use a variety of barcode series, hoping they are globally unique identifiers (GUID's) but without any formal registry. Barcode series are an alphanumeric prefix followed by a number. Current code series being used are
CASENT1234567
Ideally the prefix is registered coden for a collection (e.g. Bishop Museum registry of insect and spider collections).

The philosopy we promote:
- Specimen barcodes are not ownership labels, they should be constant and go with the specimen regardless of ownership.
- Specimen databases should accommodate any kind of specimen barcode as long as it is unique.
- Specimen databases should have lots of operability built around specimen codes (quickly looking up a specimen, selecting sets of specimens, efficient batch importing and exporting of specimen data).
- The barcode symbol should contain the whole alphanumeric code so that machine readability is not dependent on knowing that the specimen comes from a particular institution.

Labels are pinned upside down as the bottom label, the same as done with older code49 labels.

http://www.barcodestore.com/software/bartendr/

Imager:

Model: PowerScan 7000 SRI Industrial Strength Imaging Scanner (2D, USB, High Density and POT Cable).

Be sure to specify the "HD" part (for high density). They are used to selling lots of 7000 2D, but not the high density version. Best to call them on the phone and convince them that you really want the high density version.

Update: this imager is no longer produced. There are alternative HD scanners that read datamatrix just fine. The Code49 stacked code that INBio began using in the late 1980's is read by the PowerScan 7000, but I can't find a new scanner that reads them.