pyxylookup Documentation

Release 0.1

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Python client for the OBIS xylookup API

Source on GitHub at iobis/pyxylookup

Other OBIS xylookup clients:

- R: *obistools*, iobis/obistools

CHAPTER 1

Getting help

Having trouble? Or want to know how to get started?

- Looking for specific information? Try the genindex
- Report bugs with pyxylookup in our issue tracker.

CHAPTER 2

Getting started

The main function in this package is the lookup function:

```
import pyxylookup as xy

xy.lookup([[120,0], [-170,1]])
```

Usage More examples

LICENSE The pyxylookup license.

2.1 Usage

The *lookup* function supports 3 different inputs for the points parameter. A nested list of longitude/latitude values, a 2D numpy array or a pandas DataFrame with 2 columns.

```
# nested list of longitude/latitude
import pyxylookup as xy
xy.lookup([[120,0], [-170,1]])

# numpy 2d array
import numpy as np
points = np.asarray([[120,0], [-170,1]])
xy.lookup(points)

## pandas DataFrame
import pandas as pd
points = pd.DataFrame({'x': [120,-170], 'y': [0,1]})
## retrieve results as a pandas DataFrame
xy.lookup(points, asdataframe = True)
```

Additional parameters allow you to specify the data returned by the service:

```
import pyxylookup as xy
points = [[120,0], [-170,1]]
# only distance to the shore
xy.lookup(points, shoredistance=True, grids=False, areas=False, asdataframe=False)
# only grids (bathymetry, sea surface temperature, ...)
xy.lookup(points, shoredistance=False, grids=True, areas=False, asdataframe=False)
# all data
xy.lookup(points, shoredistance=True, grids=True, areas=True, asdataframe=False)
```

For those using the pandas package, a pandas.DataFrame can be used for the points parameter and can be returned by the *lookup* function:

```
import pandas as pd
points = pd.DataFrame({'x': [120,-170], 'y': [0,1]})
## retrieve results as a pandas DataFrame
xy.lookup(points, shoredistance=True, grids=True, areas=True, asdataframe = True)
```

Please report bugs, questions and suggestions in our issue tracker.

2.2 LICENSE