

```
In [148]: import numpy as np
import pandas as pd

import matplotlib
import matplotlib.pyplot as plt

fish = pd.read_csv("fish.csv")
landing = pd.read_csv("landing.csv")
```

```
In [150]: fish.head()
```

Out[150]:

|   | Unnamed: 0 | unique.code        | S_C  | S_SC | S_L  | S_S  | longitude   | latitude  | year | season | ... | Cyclopteridae1 | Paralabrax1 | Sciaenidae1 |
|---|------------|--------------------|------|------|------|------|-------------|-----------|------|--------|-----|----------------|-------------|-------------|
| 0 | 11491      | 76.7 49 1904<br>RL | 1904 | RL   | 76.7 | 49.0 | -120.776667 | 35.086667 | 2019 | spring | ... | 0.0            | 0.0         | 0.0         |
| 1 | 11492      | 76.7 51 1904<br>RL | 1904 | RL   | 76.7 | 51.0 | -120.915000 | 35.021667 | 2019 | spring | ... | 0.0            | 0.0         | 0.0         |
| 2 | 11493      | 76.7 55 1904<br>RL | 1904 | RL   | 76.7 | 55.0 | -121.196667 | 34.890000 | 2019 | spring | ... | 0.0            | 0.0         | 0.0         |
| 3 | 11494      | 76.7 60 1904<br>RL | 1904 | RL   | 76.7 | 60.0 | -121.551667 | 34.720000 | 2019 | spring | ... | 0.0            | 0.0         | 0.0         |
| 4 | 11495      | 76.7 70 1904<br>RL | 1904 | RL   | 76.7 | 70.0 | -122.245000 | 34.390000 | 2019 | spring | ... | 0.0            | 0.0         | 0.0         |

5 rows × 109 columns



```
In [151]: landing.head()
```

```
Out[151]:
```

|   | Year | Month | BlockCode | SpeciesName       | SpeciesCode | TotalPrice | CatchLbs |
|---|------|-------|-----------|-------------------|-------------|------------|----------|
| 0 | 1969 | 1.0   | 600.0     | Mackerel, jack    |             | 55.0       |          |
| 1 | 1969 | 1.0   | 654.0     | Mackerel, jack    |             | 55.0       |          |
| 2 | 1969 | 1.0   | 665.0     | Mackerel, jack    |             | 55.0       |          |
| 3 | 1969 | 1.0   | 681.0     | Mackerel, jack    |             | 55.0       |          |
| 4 | 1969 | 1.0   | 683.0     | Anchovy, northern |             | 110.0      |          |

```
In [152]: landing.shape
```

```
Out[152]: (40047, 7)
```

```
In [153]: landing['TotalPrice'].replace(' ', np.nan, inplace=True)  
landing['CatchLbs'].replace(' ', np.nan, inplace=True)
```

In [154]: landing

Out[154]:

|       | Year                          | Month | BlockCode | SpeciesName       | SpeciesCode | TotalPrice | CatchLbs |
|-------|-------------------------------|-------|-----------|-------------------|-------------|------------|----------|
| 0     | 1969                          | 1.0   | 600.0     | Mackerel, jack    | 55.0        | NaN        | NaN      |
| 1     | 1969                          | 1.0   | 654.0     | Mackerel, jack    | 55.0        | NaN        | NaN      |
| 2     | 1969                          | 1.0   | 665.0     | Mackerel, jack    | 55.0        | NaN        | NaN      |
| 3     | 1969                          | 1.0   | 681.0     | Mackerel, jack    | 55.0        | NaN        | NaN      |
| 4     | 1969                          | 1.0   | 683.0     | Anchovy, northern | 110.0       | NaN        | NaN      |
| ...   | ...                           | ...   | ...       | ...               | ...         | ...        | ...      |
| 40042 | NaN                           | NaN   | NaN       | NaN               | NaN         | NaN        | NaN      |
| 40043 | Rule of Three                 | NaN   | NaN       | NaN               | NaN         | NaN        | NaN      |
| 40044 | Rows Affected: 36783          | NaN   | NaN       | NaN               | NaN         | NaN        | NaN      |
| 40045 | Total Pounds Affected: 75.79% | NaN   | NaN       | NaN               | NaN         | NaN        | NaN      |
| 40046 | Total Price Affected: 69.45%  | NaN   | NaN       | NaN               | NaN         | NaN        | NaN      |

40047 rows × 7 columns

In [155]: landing.dropna(subset=['TotalPrice'], inplace=True)  
 landing.dropna(subset=['CatchLbs'], inplace=True)

In [156]: landing.head()

Out[156]:

|       | Year | Month | BlockCode | SpeciesName       | SpeciesCode | TotalPrice | CatchLbs |
|-------|------|-------|-----------|-------------------|-------------|------------|----------|
| 14269 | 1987 | 1.0   | 600.0     | Opah              | 467.0       | 135.45     | 942      |
| 14273 | 1987 | 1.0   | 700.0     | Mackerel, Pacific | 51.0        | 115507.803 | 1527577  |
| 14274 | 1987 | 1.0   | 700.0     | Opah              | 467.0       | 251.6      | 864      |
| 14279 | 1987 | 1.0   | 719.0     | Mackerel, Pacific | 51.0        | 192.29     | 1171     |
| 14295 | 1987 | 1.0   | 1032.0    | Mackerel, Pacific | 51.0        | 396.675    | 1148.75  |

```
In [157]: landing.shape
```

```
Out[157]: (3259, 7)
```

```
In [158]: landing['TotalPrice'] = landing['TotalPrice'].astype(float)
landing['CatchLbs'] = landing['CatchLbs'].astype(float)
```

```
In [159]: landing.describe()
```

```
Out[159]:
```

|              | Month       | BlockCode   | SpeciesCode | TotalPrice   | CatchLbs     |
|--------------|-------------|-------------|-------------|--------------|--------------|
| <b>count</b> | 3259.000000 | 3259.000000 | 3259.000000 | 3.259000e+03 | 3.259000e+03 |
| <b>mean</b>  | 6.673826    | 809.444001  | 111.689475  | 2.781027e+04 | 4.970166e+05 |
| <b>std</b>   | 3.325602    | 138.934181  | 126.770598  | 6.519300e+04 | 9.827517e+05 |
| <b>min</b>   | 1.000000    | 441.000000  | 40.000000   | 0.000000e+00 | 5.600000e+00 |
| <b>25%</b>   | 4.000000    | 720.000000  | 51.000000   | 8.898050e+02 | 1.962300e+03 |
| <b>50%</b>   | 7.000000    | 762.000000  | 51.000000   | 5.193300e+03 | 7.697600e+04 |
| <b>75%</b>   | 9.000000    | 863.000000  | 100.000000  | 2.808071e+04 | 5.321430e+05 |
| <b>max</b>   | 12.000000   | 1042.000000 | 467.000000  | 1.318225e+06 | 9.448035e+06 |

```
In [160]: landing.head()
```

```
Out[160]:
```

|              | Year | Month | BlockCode | SpeciesName       | SpeciesCode | TotalPrice | CatchLbs   |
|--------------|------|-------|-----------|-------------------|-------------|------------|------------|
| <b>14269</b> | 1987 | 1.0   | 600.0     | Opah              | 467.0       | 135.450    | 942.00     |
| <b>14273</b> | 1987 | 1.0   | 700.0     | Mackerel, Pacific | 51.0        | 115507.803 | 1527577.00 |
| <b>14274</b> | 1987 | 1.0   | 700.0     | Opah              | 467.0       | 251.600    | 864.00     |
| <b>14279</b> | 1987 | 1.0   | 719.0     | Mackerel, Pacific | 51.0        | 192.290    | 1171.00    |
| <b>14295</b> | 1987 | 1.0   | 1032.0    | Mackerel, Pacific | 51.0        | 396.675    | 1148.75    |

```
In [161]: landing.SpeciesName.unique()
```

```
Out[161]: array(['Opah', 'Mackerel, Pacific', 'Yellowtail',  
                'Anchovy, northern', 'Mackerel, jack',  
                'Sardine, Pacific'], dtype=object)
```

```
In [162]: landing['SpeciesName'].value_counts()
```

```
Out[162]: Mackerel, Pacific      1254  
Sardine, Pacific      921  
Yellowtail      407  
Opah      356  
Mackerel, jack      180  
Anchovy, northern      141  
Name: SpeciesName, dtype: int64
```

```
In [163]: landing_grouped = landing.groupby(['Year', 'SpeciesName']).sum()  
landing_grouped = landing_grouped.reset_index()  
landing_grouped = landing_grouped.drop(columns=['BlockCode', 'SpeciesCode', 'Month'])
```

```
In [164]: landing_grouped.head()
```

```
Out[164]:
```

|   | Year | SpeciesName       | TotalPrice  | CatchLbs    |
|---|------|-------------------|-------------|-------------|
| 0 | 1987 | Anchovy, northern | 26716.750   | 720531.00   |
| 1 | 1987 | Mackerel, Pacific | 1314432.161 | 24095100.05 |
| 2 | 1987 | Mackerel, jack    | 9170.750    | 113402.00   |
| 3 | 1987 | Opah              | 14030.170   | 38861.30    |
| 4 | 1987 | Sardine, Pacific  | 2862.600    | 58613.00    |

```
In [165]: landing_grouped.shape
```

```
Out[165]: (192, 4)
```

```
In [166]: landing_grouped['SpeciesName'].replace('Anchovy, northern', 'Anchovy, northern', inplace=True)  
landing_grouped['SpeciesName'].replace('Sardine, Pacific', 'Sardine, Pacific', inplace=True)
```

```
In [167]: landing_price = landing_grouped[['Year', 'SpeciesName', 'TotalPrice']]
landing_lbs = landing_grouped[['Year', 'SpeciesName', 'CatchLbs']]
```

```
In [168]: landing_grouped.SpeciesName.unique()
```

```
Out[168]: array(['Anchovy, northern', 'Mackerel, Pacific', 'Mackerel, jack', 'Opah',
                'Sardine, Pacific', 'Yellowtail'], dtype=object)
```

```
In [190]: .6, 1.57, 1.53, 1.47, 1.46, 1.42, 1.39, 1.35, 1.3, 1.27, 1.22, 1.22, 1.19, 1.17, 1.14, 1.12, 1.1, 1.1, 1.09, 1.0
```



```
In [191]: landing_anchovy = landing_grouped[landing_grouped.values == 'Anchovy, northern']
landing_mackerelp = landing_grouped[landing_grouped.values == 'Mackerel, Pacific']
landing_mackerelj = landing_grouped[landing_grouped.values == 'Mackerel, jack']
landing_opah = landing_grouped[landing_grouped.values == 'Opah']
landing_sardine = landing_grouped[landing_grouped.values == 'Sardine, Pacific']
landing_yellowtail = landing_grouped[landing_grouped.values == 'Yellowtail']
```

```
In [192]: landing_anchovy['PricePound'] = landing_anchovy['TotalPrice']/landing_anchovy['CatchLbs']
inflation_anchovy = [2.32, 2.23, 2.13, 2.02, 1.92, 1.81, 1.76, 1.67, 1.62, 1.6, 1.57, 1.53, 1.47, 1.46, 1.42, 1.38, 1.34, 1.3, 1.26, 1.22, 1.18, 1.14, 1.1, 1.06, 1.02, 0.98, 0.94, 0.9, 0.86, 0.82, 0.78, 0.74, 0.7, 0.66, 0.62, 0.58, 0.54, 0.5, 0.46, 0.42, 0.38, 0.34, 0.3, 0.26, 0.22, 0.18, 0.14, 0.1, 0.06, 0.02]
landing_anchovy['PricePoundAdj'] = landing_anchovy['TotalPrice']*inflation_anchovy/landing_anchovy['CatchLbs']
```

<ipython-input-192-fe0ea8be5097>:1: SettingWithCopyWarning:  
A value is trying to be set on a copy of a slice from a DataFrame.  
Try using .loc[row\_indexer,col\_indexer] = value instead

See the caveats in the documentation: [https://pandas.pydata.org/pandas-docs/stable/user\\_guide/indexing.html#returning-a-view-versus-a-copy](https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy) ([https://pandas.pydata.org/pandas-docs/stable/user\\_guide/indexing.html#returning-a-view-versus-a-copy](https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy))

```
landing_anchovy['PricePound'] = landing_anchovy['TotalPrice']/landing_anchovy['CatchLbs']
```

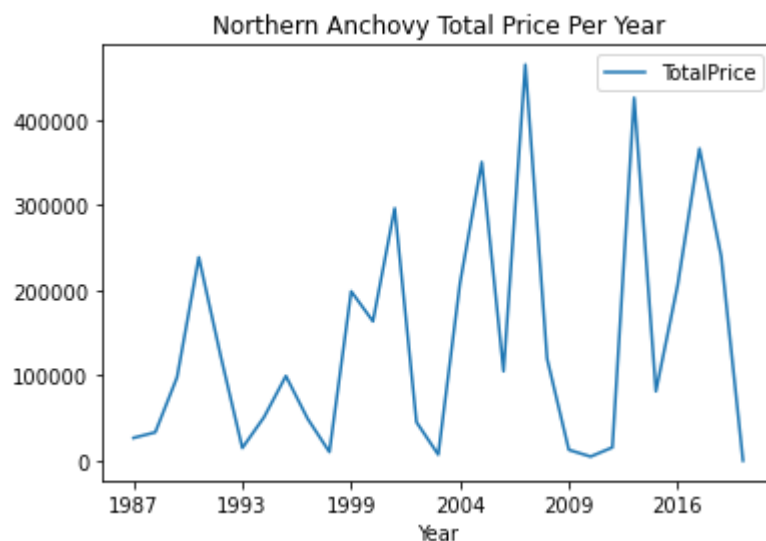
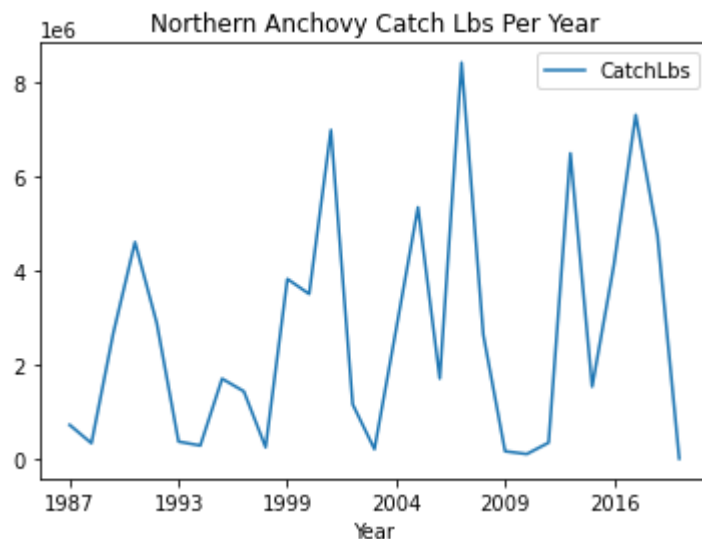
<ipython-input-192-fe0ea8be5097>:3: SettingWithCopyWarning:  
A value is trying to be set on a copy of a slice from a DataFrame.  
Try using .loc[row\_indexer,col\_indexer] = value instead

See the caveats in the documentation: [https://pandas.pydata.org/pandas-docs/stable/user\\_guide/indexing.html#returning-a-view-versus-a-copy](https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy) ([https://pandas.pydata.org/pandas-docs/stable/user\\_guide/indexing.html#returning-a-view-versus-a-copy](https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy))

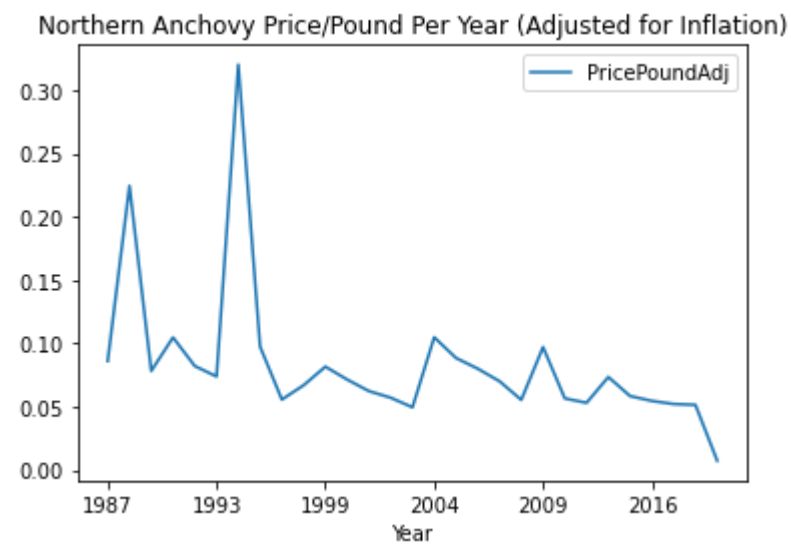
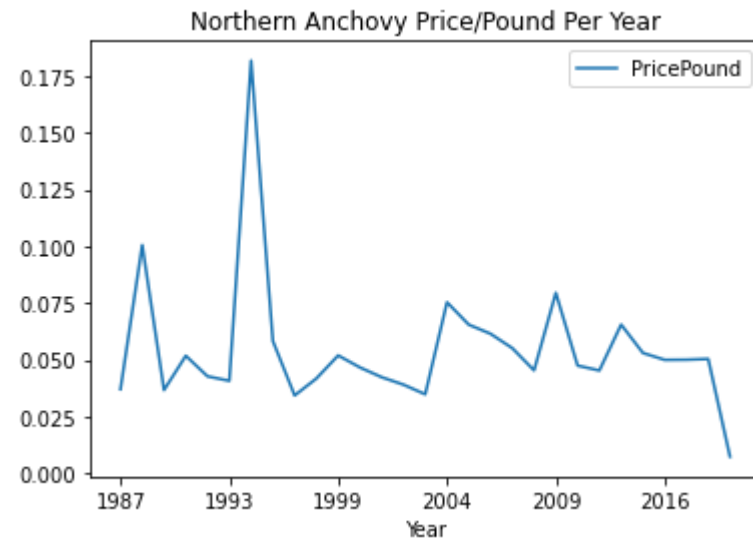
```
landing_anchovy['PricePoundAdj'] = landing_anchovy['TotalPrice']*inflation_anchovy/landing_anchovy['CatchLbs']
```

```
In [193]: landing_anchovy.plot(x='Year', y = 'CatchLbs', title = 'Northern Anchovy Catch Lbs Per Year')
landing_anchovy.plot(x='Year', y = 'TotalPrice', title = 'Northern Anchovy Total Price Per Year')
landing_anchovy.plot(x='Year', y = 'PricePound', title = 'Northern Anchovy Price/Pound Per Year')
landing_anchovy.plot(x='Year', y = 'PricePoundAdj', title = 'Northern Anchovy Price/Pound Per Year (Adjusted for
```

Out[193]: <matplotlib.axes.\_subplots.AxesSubplot at 0x19a61753400>







```
In [194]: landing_mackerelp['PricePound'] = landing_mackerelp['TotalPrice']/landing_mackerelp['CatchLbs']  
          landing_mackerelp['PricePoundAdj'] = landing_mackerelp['TotalPrice']*inflation/landing_mackerelp['CatchLbs']
```

```
<ipython-input-194-7d3439f18274>:1: SettingWithCopyWarning:  
A value is trying to be set on a copy of a slice from a DataFrame.  
Try using .loc[row_indexer,col_indexer] = value instead
```

See the caveats in the documentation: [https://pandas.pydata.org/pandas-docs/stable/user\\_guide/indexing.html#returning-a-view-versus-a-copy](https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy) ([https://pandas.pydata.org/pandas-docs/stable/user\\_guide/indexing.html#returning-a-view-versus-a-copy](https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy))

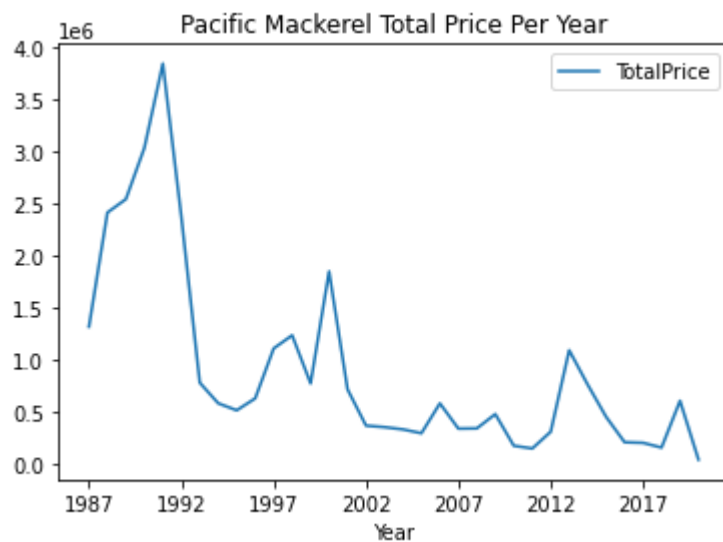
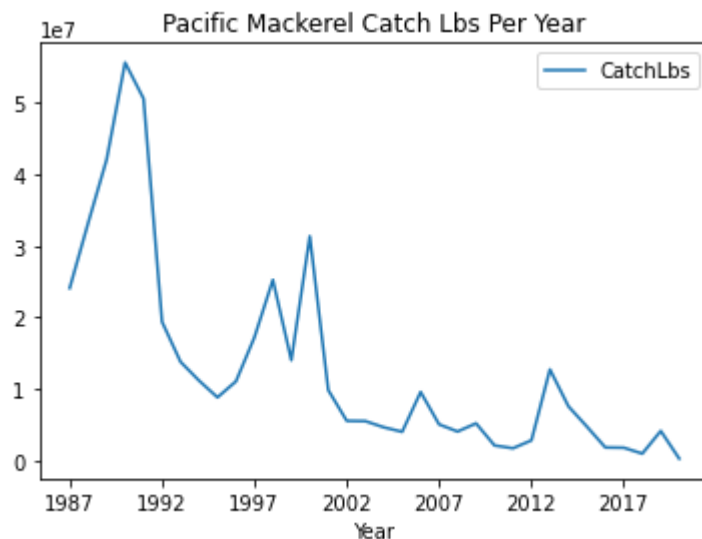
```
          landing_mackerelp['PricePound'] = landing_mackerelp['TotalPrice']/landing_mackerelp['CatchLbs']  
<ipython-input-194-7d3439f18274>:2: SettingWithCopyWarning:  
A value is trying to be set on a copy of a slice from a DataFrame.  
Try using .loc[row_indexer,col_indexer] = value instead
```

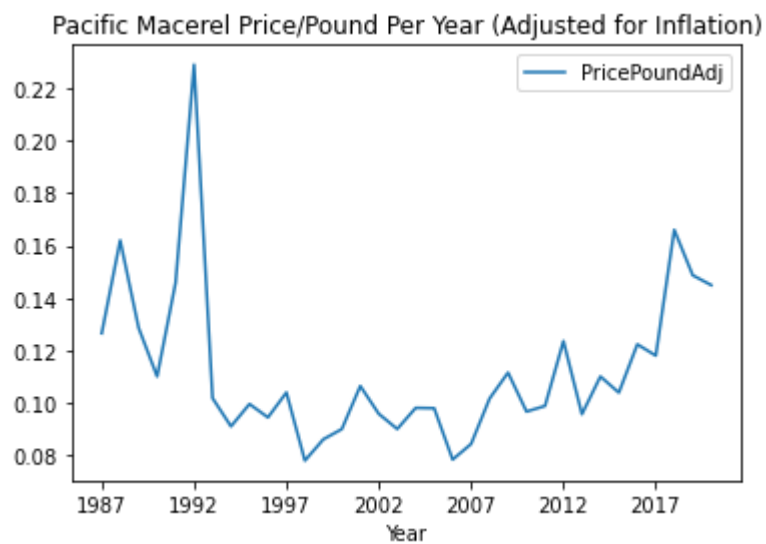
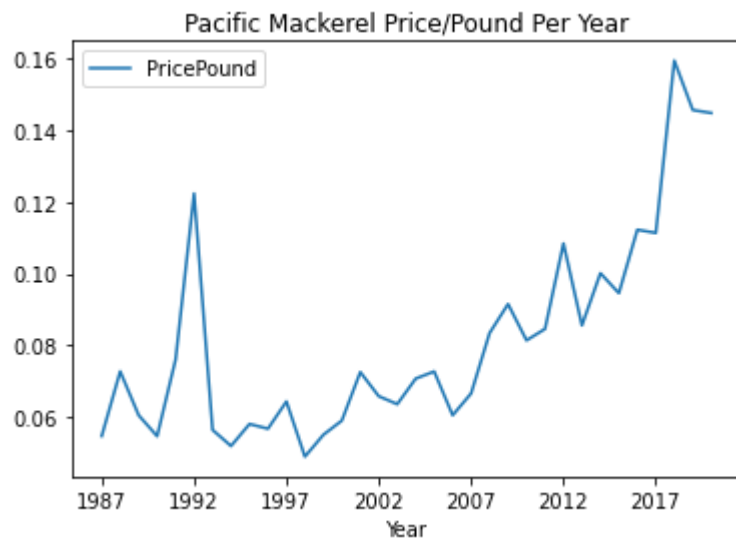
See the caveats in the documentation: [https://pandas.pydata.org/pandas-docs/stable/user\\_guide/indexing.html#returning-a-view-versus-a-copy](https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy) ([https://pandas.pydata.org/pandas-docs/stable/user\\_guide/indexing.html#returning-a-view-versus-a-copy](https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy))

```
          landing_mackerelp['PricePoundAdj'] = landing_mackerelp['TotalPrice']*inflation/landing_mackerelp['CatchLbs']
```

```
In [195]: landing_mackerelp.plot(x='Year', y = 'CatchLbs', title = 'Pacific Mackerel Catch Lbs Per Year')
landing_mackerelp.plot(x='Year', y = 'TotalPrice', title = 'Pacific Mackerel Total Price Per Year')
landing_mackerelp.plot(x='Year', y = 'PricePound', title = 'Pacific Mackerel Price/Pound Per Year')
landing_mackerelp.plot(x='Year', y = 'PricePoundAdj', title = 'Pacific Mackerel Price/Pound Per Year (Adjusted for Inflation)')
```

Out[195]: <matplotlib.axes.\_subplots.AxesSubplot at 0x19a632399d0>





```
In [196]: landing_mackerelj['PricePound'] = landing_mackerelj['TotalPrice']/landing_mackerelj['CatchLbs']
inflation_j = [2.32, 2.23, 2.13, 2.02, 1.92, 1.87, 1.81, 1.76, 1.72, 1.67, 1.62, 1.6, 1.57, 1.53, 1.47, 1.46, 1.
landing_mackerelj['PricePoundAdj'] = landing_mackerelj['TotalPrice']*inflation_j/landing_mackerelj['CatchLbs']
```

<ipython-input-196-dfb39e6f3f41>:1: SettingWithCopyWarning:  
A value is trying to be set on a copy of a slice from a DataFrame.  
Try using .loc[row\_indexer,col\_indexer] = value instead

See the caveats in the documentation: [https://pandas.pydata.org/pandas-docs/stable/user\\_guide/indexing.html#returning-a-view-versus-a-copy](https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy) ([https://pandas.pydata.org/pandas-docs/stable/user\\_guide/indexing.html#returning-a-view-versus-a-copy](https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy))

```
    landing_mackerelj['PricePound'] = landing_mackerelj['TotalPrice']/landing_mackerelj['CatchLbs']
```

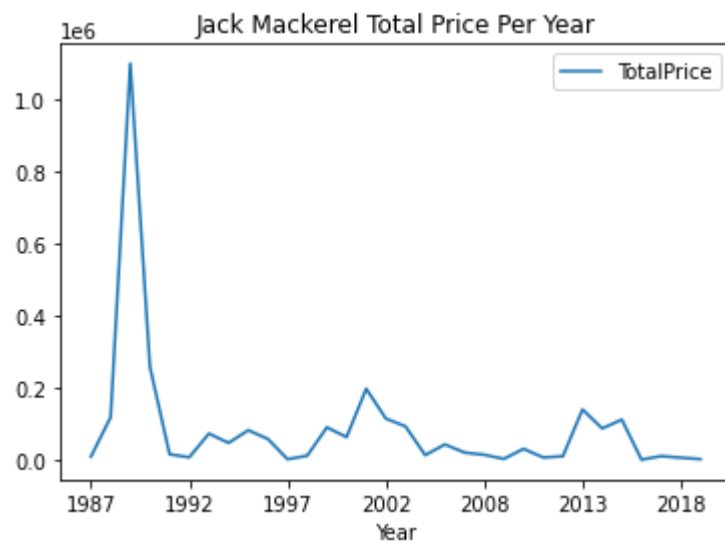
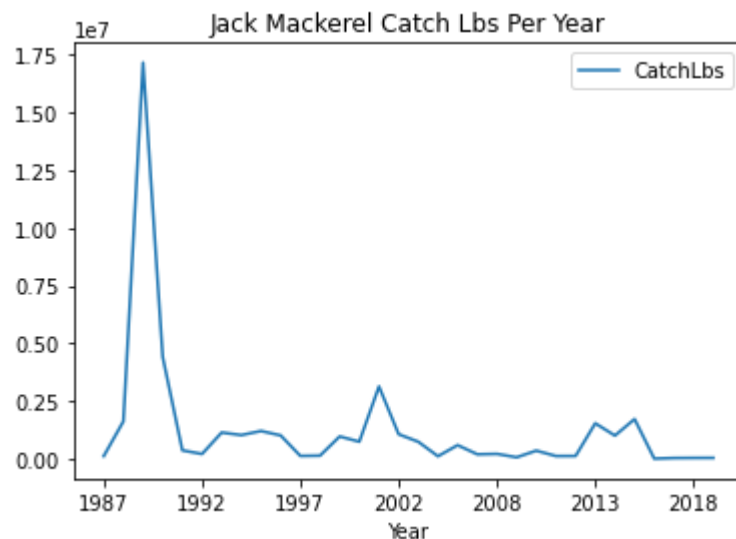
<ipython-input-196-dfb39e6f3f41>:3: SettingWithCopyWarning:  
A value is trying to be set on a copy of a slice from a DataFrame.  
Try using .loc[row\_indexer,col\_indexer] = value instead

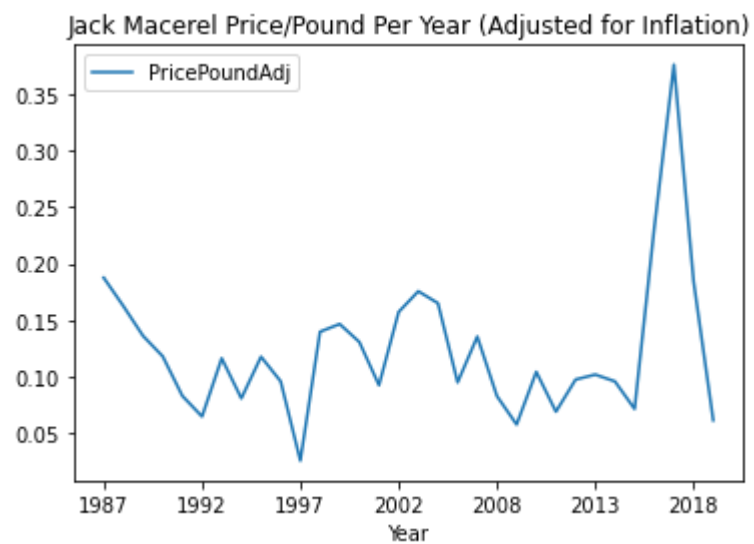
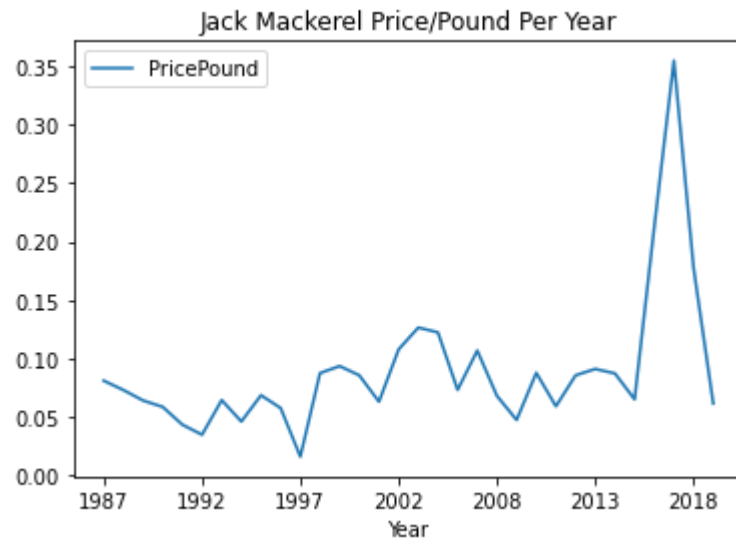
See the caveats in the documentation: [https://pandas.pydata.org/pandas-docs/stable/user\\_guide/indexing.html#returning-a-view-versus-a-copy](https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy) ([https://pandas.pydata.org/pandas-docs/stable/user\\_guide/indexing.html#returning-a-view-versus-a-copy](https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy))

```
    landing_mackerelj['PricePoundAdj'] = landing_mackerelj['TotalPrice']*inflation_j/landing_mackerelj['CatchLbs']
```

```
In [197]: landing_mackerelj.plot(x='Year', y = 'CatchLbs', title = 'Jack Mackerel Catch Lbs Per Year')
landing_mackerelj.plot(x='Year', y = 'TotalPrice', title = 'Jack Mackerel Total Price Per Year')
landing_mackerelj.plot(x='Year', y = 'PricePound', title = 'Jack Mackerel Price/Pound Per Year')
landing_mackerelj.plot(x='Year', y = 'PricePoundAdj', title = 'Jack Macerel Price/Pound Per Year (Adjusted for I
```

Out[197]: <matplotlib.axes.\_subplots.AxesSubplot at 0x19a65273af0>





```
In [205]: inflation_opah = [2.32, 2.23, 2.13, 2.02, 1.92, 1.87, 1.81, 1.76, 1.72, 1.67, 1.62, 1.6, 1.57, 1.53, 1.47, 1.46,  
landing_opah['PricePound'] = landing_opah['TotalPrice']/landing_opah['CatchLbs']  
landing_opah['PricePoundAdj'] = landing_opah['TotalPrice']*inflation_opah/landing_opah['CatchLbs']
```

<ipython-input-205-e7ce7fa71dfb>:2: SettingWithCopyWarning:  
A value is trying to be set on a copy of a slice from a DataFrame.  
Try using .loc[row\_indexer,col\_indexer] = value instead

See the caveats in the documentation: [https://pandas.pydata.org/pandas-docs/stable/user\\_guide/indexing.html#returning-a-view-versus-a-copy](https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy) ([https://pandas.pydata.org/pandas-docs/stable/user\\_guide/indexing.html#returning-a-view-versus-a-copy](https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy))

```
    landing_opah['PricePound'] = landing_opah['TotalPrice']/landing_opah['CatchLbs']
```

<ipython-input-205-e7ce7fa71dfb>:3: SettingWithCopyWarning:  
A value is trying to be set on a copy of a slice from a DataFrame.  
Try using .loc[row\_indexer,col\_indexer] = value instead

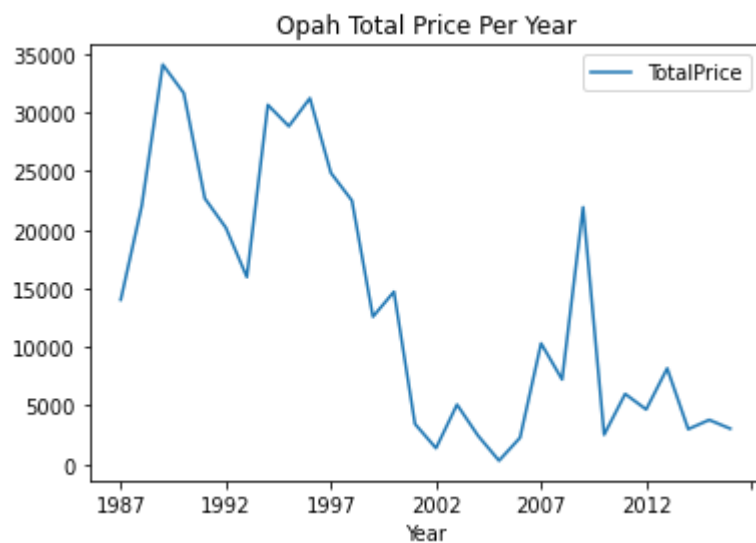
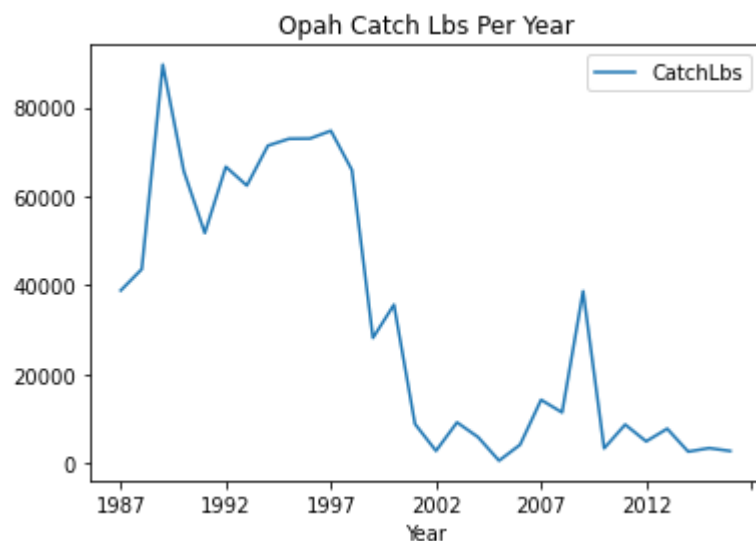
See the caveats in the documentation: [https://pandas.pydata.org/pandas-docs/stable/user\\_guide/indexing.html#returning-a-view-versus-a-copy](https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy) ([https://pandas.pydata.org/pandas-docs/stable/user\\_guide/indexing.html#returning-a-view-versus-a-copy](https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy))

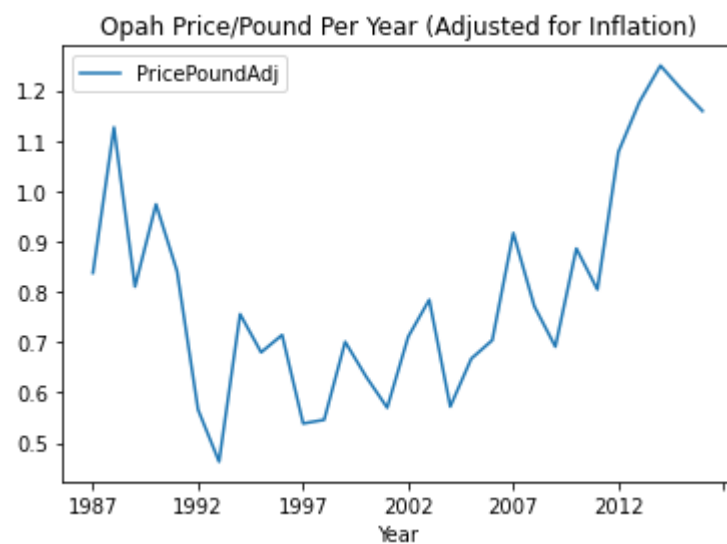
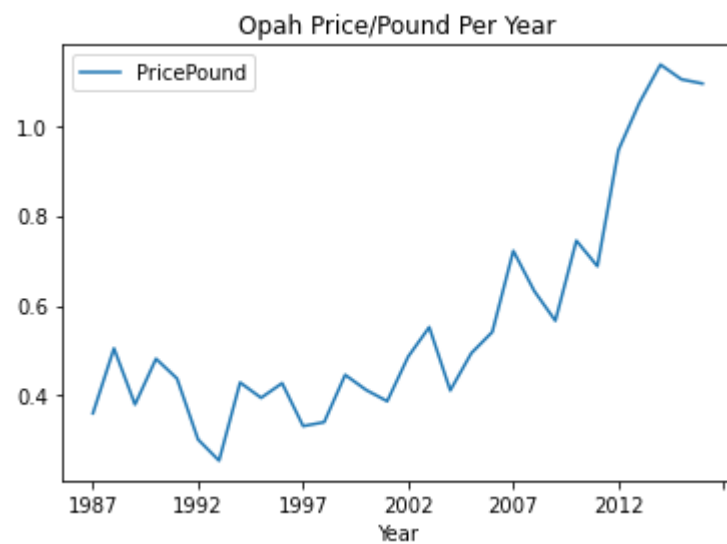
```
    landing_opah['PricePoundAdj'] = landing_opah['TotalPrice']*inflation_opah/landing_opah['CatchLbs']
```



```
In [206]: landing_opah.plot(x='Year', y = 'CatchLbs', title = 'Opah Catch Lbs Per Year')  
          landing_opah.plot(x='Year', y = 'TotalPrice', title = 'Opah Total Price Per Year')  
          landing_opah.plot(x='Year', y = 'PricePound', title = 'Opah Price/Pound Per Year')  
          landing_opah.plot(x='Year', y = 'PricePoundAdj', title = 'Opah Price/Pound Per Year (Adjusted for Inflation)')
```

Out[206]: <matplotlib.axes.\_subplots.AxesSubplot at 0x19a65db4220>





```
In [208]: landing_sardine['PricePound'] = landing_sardine['TotalPrice']/landing_sardine['CatchLbs']  
          landing_sardine['PricePoundAdj'] = landing_sardine['TotalPrice']*inflation/landing_sardine['CatchLbs']
```

```
<ipython-input-208-fc33d455d2c0>:1: SettingWithCopyWarning:  
A value is trying to be set on a copy of a slice from a DataFrame.  
Try using .loc[row_indexer,col_indexer] = value instead
```

See the caveats in the documentation: [https://pandas.pydata.org/pandas-docs/stable/user\\_guide/indexing.html#returning-a-view-versus-a-copy](https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy) ([https://pandas.pydata.org/pandas-docs/stable/user\\_guide/indexing.html#returning-a-view-versus-a-copy](https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy))

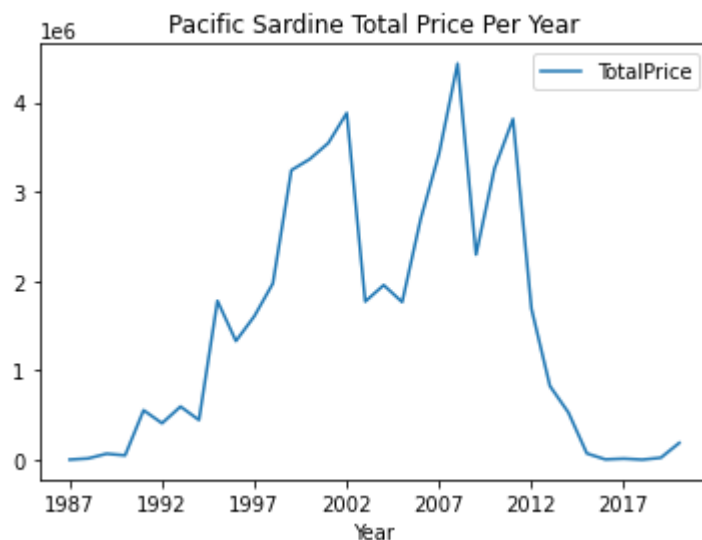
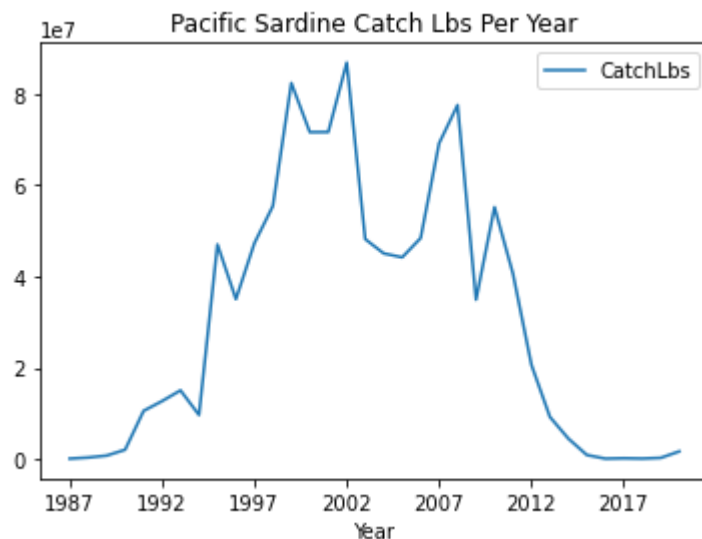
```
          landing_sardine['PricePound'] = landing_sardine['TotalPrice']/landing_sardine['CatchLbs']  
<ipython-input-208-fc33d455d2c0>:2: SettingWithCopyWarning:  
A value is trying to be set on a copy of a slice from a DataFrame.  
Try using .loc[row_indexer,col_indexer] = value instead
```

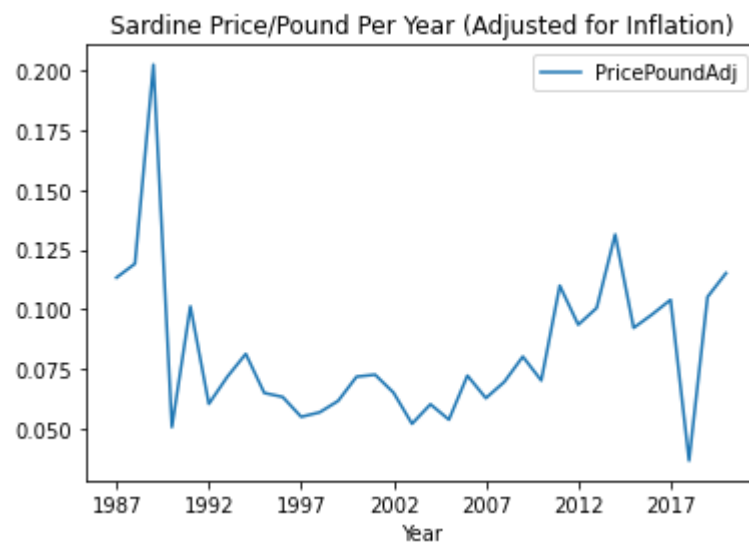
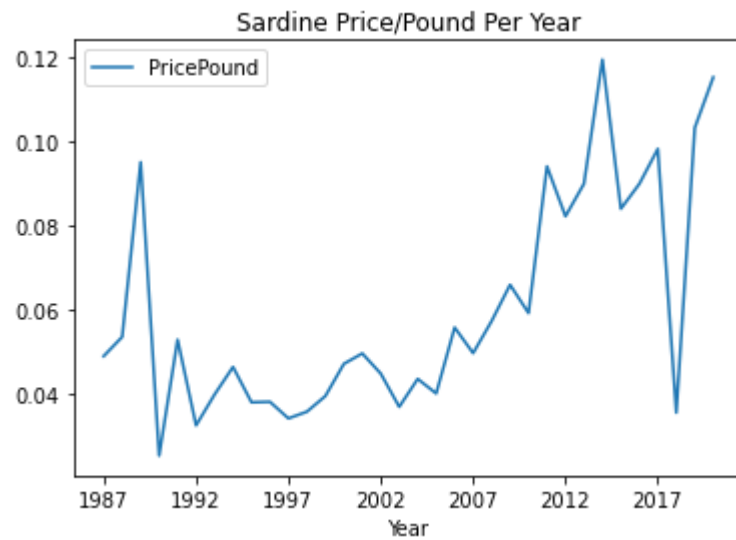
See the caveats in the documentation: [https://pandas.pydata.org/pandas-docs/stable/user\\_guide/indexing.html#returning-a-view-versus-a-copy](https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy) ([https://pandas.pydata.org/pandas-docs/stable/user\\_guide/indexing.html#returning-a-view-versus-a-copy](https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy))

```
          landing_sardine['PricePoundAdj'] = landing_sardine['TotalPrice']*inflation/landing_sardine['CatchLbs']
```

```
In [209]: landing_sardine.plot(x='Year', y = 'CatchLbs', title = 'Pacific Sardine Catch Lbs Per Year')
landing_sardine.plot(x='Year', y = 'TotalPrice', title = 'Pacific Sardine Total Price Per Year')
landing_sardine.plot(x='Year', y = 'PricePound', title = 'Sardine Price/Pound Per Year')
landing_sardine.plot(x='Year', y = 'PricePoundAdj', title = 'Sardine Price/Pound Per Year (Adjusted for Inflation)')
```

Out[209]: <matplotlib.axes.\_subplots.AxesSubplot at 0x19a650fdf70>





```
In [213]: inflation_yellowtail = [2.32, 2.23, 2.13, 2.02, 1.92, 1.87, 1.81, 1.72, 1.67, 1.62, 1.6, 1.57, 1.53, 1.47, 1.46,
landing_yellowtail['PricePound'] = landing_yellowtail['TotalPrice']/landing_yellowtail['CatchLbs']
landing_yellowtail['PricePoundAdj'] = landing_yellowtail['TotalPrice']*inflation_yellowtail/landing_yellowtail['
```

<ipython-input-213-ffb33c03d430>:2: SettingWithCopyWarning:  
A value is trying to be set on a copy of a slice from a DataFrame.  
Try using .loc[row\_indexer,col\_indexer] = value instead

See the caveats in the documentation: [https://pandas.pydata.org/pandas-docs/stable/user\\_guide/indexing.html#returning-a-view-versus-a-copy](https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy) ([https://pandas.pydata.org/pandas-docs/stable/user\\_guide/indexing.html#returning-a-view-versus-a-copy](https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy))

```
    landing_yellowtail['PricePound'] = landing_yellowtail['TotalPrice']/landing_yellowtail['CatchLbs']
```

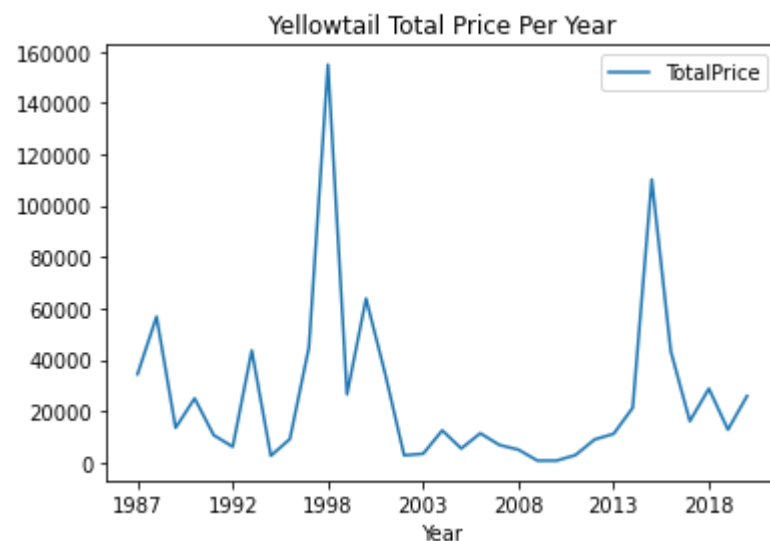
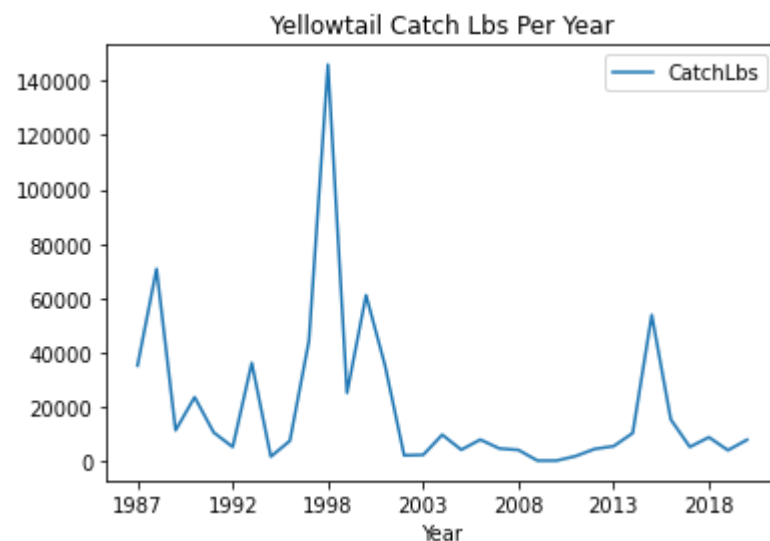
<ipython-input-213-ffb33c03d430>:3: SettingWithCopyWarning:  
A value is trying to be set on a copy of a slice from a DataFrame.  
Try using .loc[row\_indexer,col\_indexer] = value instead

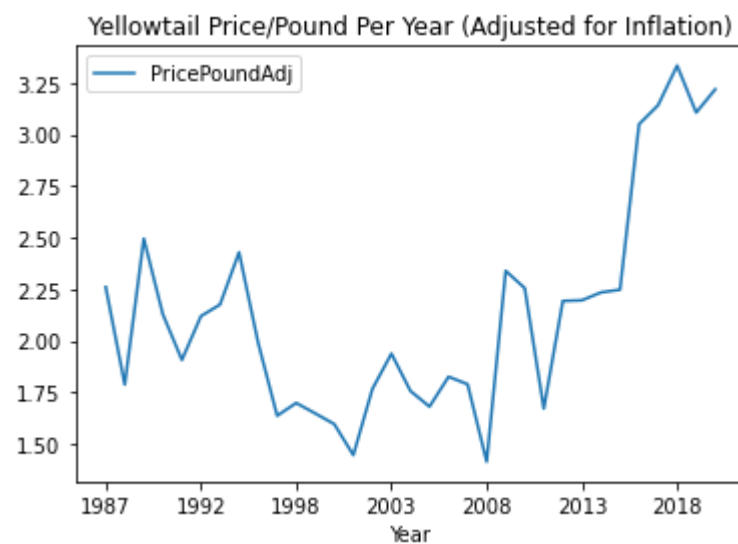
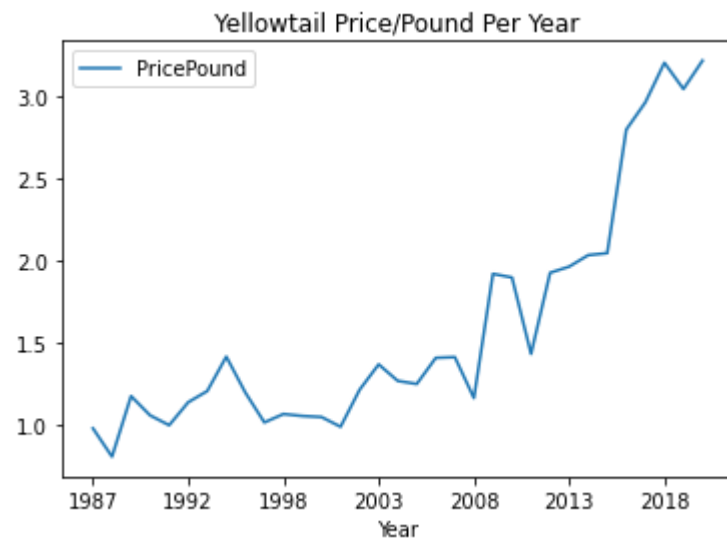
See the caveats in the documentation: [https://pandas.pydata.org/pandas-docs/stable/user\\_guide/indexing.html#returning-a-view-versus-a-copy](https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy) ([https://pandas.pydata.org/pandas-docs/stable/user\\_guide/indexing.html#returning-a-view-versus-a-copy](https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy))

```
    landing_yellowtail['PricePoundAdj'] = landing_yellowtail['TotalPrice']*inflation_yellowtail/landing_yellowtail['CatchLbs']
```

```
In [214]: landing_yellowtail.plot(x='Year', y = 'CatchLbs', title = 'Yellowtail Catch Lbs Per Year')
landing_yellowtail.plot(x='Year', y = 'TotalPrice', title = 'Yellowtail Total Price Per Year')
landing_yellowtail.plot(x='Year', y = 'PricePound', title = 'Yellowtail Price/Pound Per Year')
landing_yellowtail.plot(x='Year', y = 'PricePoundAdj', title = 'Yellowtail Price/Pound Per Year (Adjusted for In
```

Out[214]: <matplotlib.axes.\_subplots.AxesSubplot at 0x19a652dc6a0>





In [ ]:



