In [1]:
```
import pandas as pd
import numpy as np
import seaborn as sns
import matplotlib.pyplot as plt
```

In [2]:
```
df=pd.read_csv("rainfall in india 1901-2015.csv")
df
```

Out[2]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
0	0	ANDAMAN & NICOBAR ISLANDS	1901	49.2	87.1	29.2	2.3	528.8	517.5	365.1	481.1	332.6
1	1	ANDAMAN & NICOBAR ISLANDS	1902	0.0	159.8	12.2	0.0	446.1	537.1	228.9	753.7	666.2
2	2	ANDAMAN & NICOBAR ISLANDS	1903	12.7	144.0	0.0	1.0	235.1	479.9	728.4	326.7	339.0
3	3	ANDAMAN & NICOBAR ISLANDS	1904	9.4	14.7	0.0	202.4	304.5	495.1	502.0	160.1	820.4
4	4	ANDAMAN & NICOBAR ISLANDS	1905	1.3	0.0	3.3	26.9	279.5	628.7	368.7	330.5	297.0
...	...	...	...	...	...	...	...	...	...	...	...	...
4111	4111	LAKSHADWEEP	2011	5.1	2.8	3.1	85.9	107.2	153.6	350.2	254.0	255.2
4112	4112	LAKSHADWEEP	2012	19.2	0.1	1.6	76.8	21.2	327.0	231.5	381.2	179.8
4113	4113	LAKSHADWEEP	2013	26.2	34.4	37.5	5.3	88.3	426.2	296.4	154.4	180.0
4114	4114	LAKSHADWEEP	2014	53.2	16.1	4.4	14.9	57.4	244.1	116.1	466.1	132.2
4115	4115	LAKSHADWEEP	2015	2.2	0.5	3.7	87.1	133.1	296.6	257.5	146.4	160.4

4116 rows × 20 columns

In [3]:
```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 4116 entries, 0 to 4115
Data columns (total 20 columns):
 #   Column       Non-Null Count  Dtype  
---  ------       --------------  -----  
 0   index        4116 non-null   int64  
 1   SUBDIVISION  4116 non-null   object 
 2   YEAR         4116 non-null   int64  
 3   JAN          4112 non-null   float64
 4   FEB          4113 non-null   float64
 5   MAR          4110 non-null   float64
 6   APR          4112 non-null   float64
 7   MAY          4113 non-null   float64
 8   JUN          4111 non-null   float64
 9   JUL          4109 non-null   float64
 10  AUG          4112 non-null   float64
 11  SEP          4110 non-null   float64
 12  OCT          4109 non-null   float64
 13  NOV          4105 non-null   float64
 14  DEC          4106 non-null   float64
 15  ANNUAL       4090 non-null   float64
 16  Jan-Feb      4110 non-null   float64
 17  Mar-May      4107 non-null   float64
 18  Jun-Sep      4106 non-null   float64
 19  Oct-Dec      4103 non-null   float64
dtypes: float64(17), int64(2), object(1)
memory usage: 643.2+ KB
```

In [4]:
```
df.isnull().sum()
```

Out[4]:
```
index          0
SUBDIVISION    0
YEAR           0
JAN            4
FEB            3
MAR            6
APR            4
MAY            3
JUN            5
JUL            7
AUG            4
SEP            6
OCT            7
NOV           11
DEC           10
ANNUAL        26
Jan-Feb        6
Mar-May        9
Jun-Sep       10
Oct-Dec       13
dtype: int64
```

In [5]:
```
df=df.dropna()
df.isnull().sum()
```

Out[5]:
```
index          0
SUBDIVISION    0
YEAR           0
JAN            0
FEB            0
MAR            0
APR            0
MAY            0
JUN            0
JUL            0
AUG            0
SEP            0
OCT            0
NOV            0
DEC            0
ANNUAL         0
Jan-Feb        0
Mar-May        0
Jun-Sep        0
Oct-Dec        0
dtype: int64
```

In [6]:
```
df.columns
```

Out[6]:
```
Index(['index', 'SUBDIVISION', 'YEAR', 'JAN', 'FEB', 'MAR', 'APR', 'MAY',
       'JUN', 'JUL', 'AUG', 'SEP', 'OCT', 'NOV', 'DEC', 'ANNUAL', 'Jan-Feb',
       'Mar-May', 'Jun-Sep', 'Oct-Dec'],
      dtype='object')
```

In [7]:
```
a=df['SUBDIVISION']
a.value_counts()
```

Out[7]:
```
NORTH INTERIOR KARNATAKA              115
HARYANA DELHI & CHANDIGARH            115
SUB HIMALAYAN WEST BENGAL & SIKKIM    115
HIMACHAL PRADESH                      115
SOUTH INTERIOR KARNATAKA              115
CHHATTISGARH                          115
JHARKHAND                             115
MATATHWADA                            115
SAURASHTRA & KUTCH                    115
KERALA                                115
ORISSA                                115
KONKAN & GOA                          115
ASSAM & MEGHALAYA                     115
MADHYA MAHARASHTRA                    115
EAST RAJASTHAN                        115
WEST RAJASTHAN                        115
RAYALSEEMA                            115
WEST UTTAR PRADESH                    115
GUJARAT REGION                        115
UTTARAKHAND                           115
TELANGANA                             115
VIDARBHA                              115
BIHAR                                 115
GANGETIC WEST BENGAL                  115
EAST UTTAR PRADESH                    115
COASTAL ANDHRA PRADESH                115
TAMIL NADU                            115
EAST MADHYA PRADESH                   115
PUNJAB                                115
NAGA MANI MIZO TRIPURA                115
COASTAL KARNATAKA                     114
WEST MADHYA PRADESH                   114
JAMMU & KASHMIR                       114
ANDAMAN & NICOBAR ISLANDS             104
LAKSHADWEEP                           103
ARUNACHAL PRADESH                      91
Name: SUBDIVISION, dtype: int64
```

In [8]:
```
len(a.value_counts())
```

Out[8]:
```
36
```

TAMIL NADU

In [9]:
```
a1=df[df['SUBDIVISION']=='TAMIL NADU']
a1
```

Out[9]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
3427	3427	TAMIL NADU	1901	24.5	39.1	21.7	36.0	74.0	41.8	49.3	67.9	191.1	122.3
3428	3428	TAMIL NADU	1902	67.2	9.8	25.1	21.9	84.7	39.3	55.1	113.8	98.6	282.2
3429	3429	TAMIL NADU	1903	19.3	7.8	1.7	18.2	128.5	58.5	72.6	115.0	210.4	128.1
3430	3430	TAMIL NADU	1904	35.2	0.1	0.7	19.5	121.9	34.9	89.0	40.4	85.7	163.2
3431	3431	TAMIL NADU	1905	6.5	7.5	17.2	64.8	83.7	49.8	39.0	101.8	73.5	250.4
...	...	...	...	...	...	...	...	...	...	...	...	...	...
3537	3537	TAMIL NADU	2011	4.3	11.2	8.0	91.5	33.4	56.0	45.5	128.9	76.0	200.4
3538	3538	TAMIL NADU	2012	3.0	0.1	2.5	35.5	41.9	30.1	46.5	98.0	84.9	235.2
3539	3539	TAMIL NADU	2013	3.9	30.9	30.0	20.3	42.0	54.6	42.7	110.7	113.5	127.9
3540	3540	TAMIL NADU	2014	7.4	6.1	8.1	8.3	139.1	47.8	50.6	117.7	98.9	252.2
3541	3541	TAMIL NADU	2015	8.3	2.3	21.7	108.8	112.4	62.4	43.5	81.6	98.4	132.6

115 rows × 20 columns

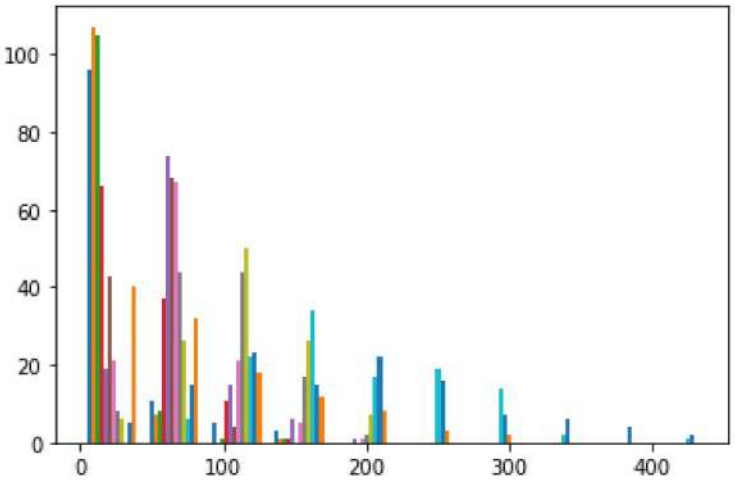
In [10]:
```
a1=a1.drop(['YEAR','SUBDIVISION','index','ANNUAL', 'Jan-Feb','Mar-May', 'Jun-S
a1
```

Out[10]:

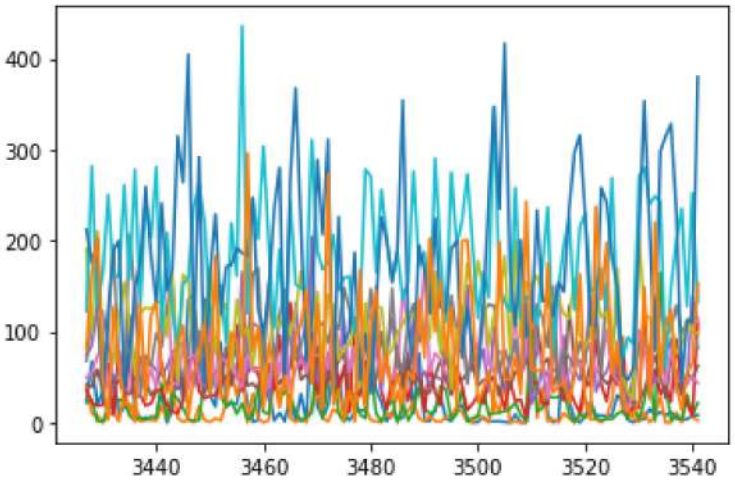
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
3427	24.5	39.1	21.7	36.0	74.0	41.8	49.3	67.9	191.1	122.3	212.3	80.4
3428	67.2	9.8	25.1	21.9	84.7	39.3	55.1	113.8	98.6	282.2	174.9	165.8
3429	19.3	7.8	1.7	18.2	128.5	58.5	72.6	115.0	210.4	128.1	200.5	203.2
3430	35.2	0.1	0.7	19.5	121.9	34.9	89.0	40.4	85.7	163.2	23.6	49.1
3431	6.5	7.5	17.2	64.8	83.7	49.8	39.0	101.8	73.5	250.4	123.7	3.2
...	...	...	...	...	...	...	...	...	...	...	...	...
3537	4.3	11.2	8.0	91.5	33.4	56.0	45.5	128.9	76.0	200.4	230.5	41.0
3538	3.0	0.1	2.5	35.5	41.9	30.1	46.5	98.0	84.9	235.2	44.5	14.0
3539	3.9	30.9	30.0	20.3	42.0	54.6	42.7	110.7	113.5	127.9	112.3	53.2
3540	7.4	6.1	8.1	8.3	139.1	47.8	50.6	117.7	98.9	252.2	110.8	66.0
3541	8.3	2.3	21.7	108.8	112.4	62.4	43.5	81.6	98.4	132.6	379.8	152.8

115 rows × 12 columns

In [11]:
```
plt.hist(a1)
plt.show()
```

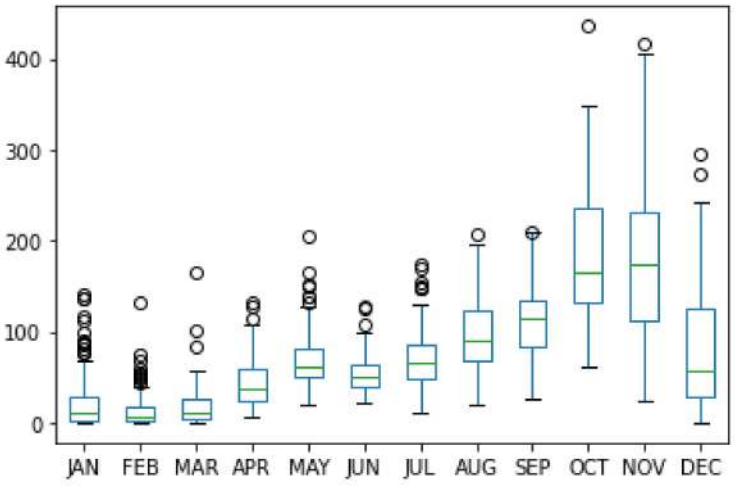


In [12]:
```
plt.plot(a1)
plt.show()
```



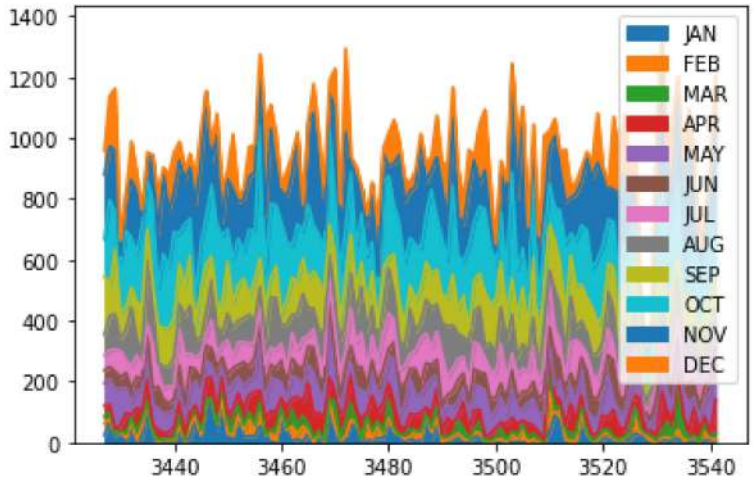
In [13]:
```
a1.plot.box()
```

Out[13]: <AxesSubplot:>



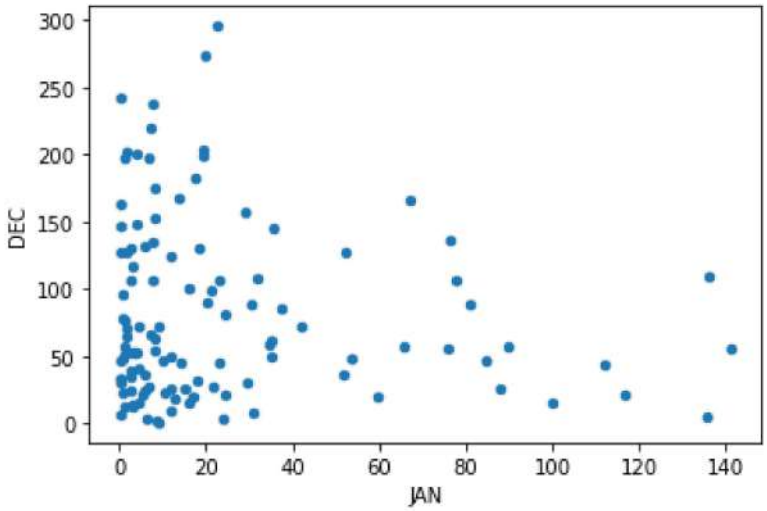
In [14]:
```
a1.plot.area()
```

Out[14]: <AxesSubplot:>



In [15]:
```
a1.plot.scatter('JAN','DEC')
```

Out[15]: <AxesSubplot:xlabel='JAN', ylabel='DEC'>



KERALA

In [16]:
```
a1=df[df['SUBDIVISION']=='KERALA']
a1
```

Out[16]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
3887	3887	KERALA	1901	28.7	44.7	51.6	160.0	174.7	824.6	743.0	357.5	197.7
3888	3888	KERALA	1902	6.7	2.6	57.3	83.9	134.5	390.9	1205.0	315.8	491.6
3889	3889	KERALA	1903	3.2	18.6	3.1	83.6	249.7	558.6	1022.5	420.2	341.8
3890	3890	KERALA	1904	23.7	3.0	32.2	71.5	235.7	1098.2	725.5	351.8	222.7
3891	3891	KERALA	1905	1.2	22.3	9.4	105.9	263.3	850.2	520.5	293.6	217.2
...	...	...	...	...	...	...	...	...	...	...	...	...
3997	3997	KERALA	2011	20.5	45.7	24.1	165.2	124.2	788.5	536.8	492.7	391.2
3998	3998	KERALA	2012	7.4	11.0	21.0	171.1	95.3	430.3	362.6	501.6	241.1
3999	3999	KERALA	2013	3.9	40.1	49.9	49.3	119.3	1042.7	830.2	369.7	318.6
4000	4000	KERALA	2014	4.6	10.3	17.9	95.7	251.0	454.4	677.8	733.9	298.8
4001	4001	KERALA	2015	3.1	5.8	50.1	214.1	201.8	563.6	406.0	252.2	292.9

115 rows × 20 columns

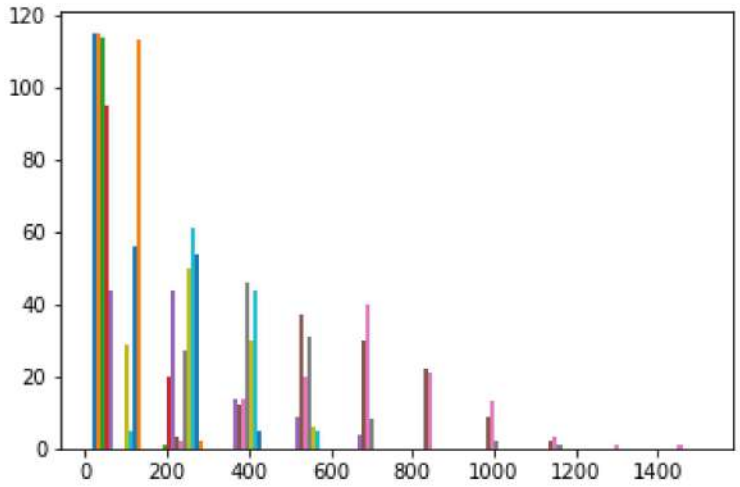
In [17]:
```
a1=a1.drop(['YEAR','SUBDIVISION','index','ANNUAL', 'Jan-Feb','Mar-May', 'Jun-S
a1
```

Out[17]:

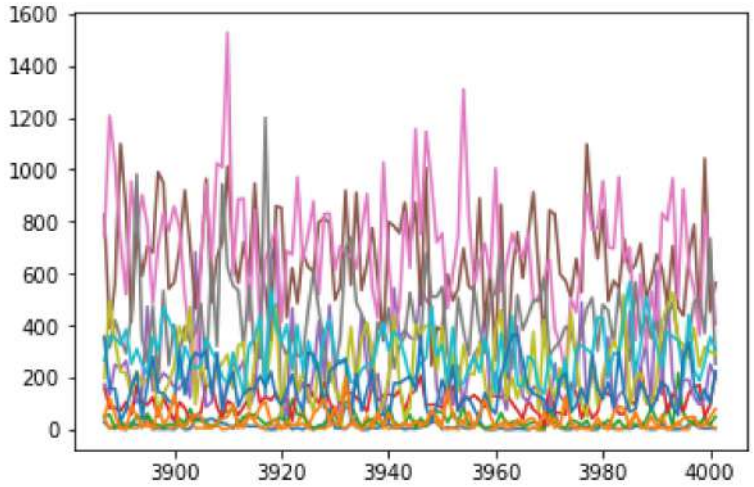
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
3887	28.7	44.7	51.6	160.0	174.7	824.6	743.0	357.5	197.7	266.9	350.8	48.4
3888	6.7	2.6	57.3	83.9	134.5	390.9	1205.0	315.8	491.6	358.4	158.3	121.5
3889	3.2	18.6	3.1	83.6	249.7	558.6	1022.5	420.2	341.8	354.1	157.0	59.0
3890	23.7	3.0	32.2	71.5	235.7	1098.2	725.5	351.8	222.7	328.1	33.9	3.3
3891	1.2	22.3	9.4	105.9	263.3	850.2	520.5	293.6	217.2	383.5	74.4	0.2
...	...	...	...	...	...	...	...	...	...	...	...	...
3997	20.5	45.7	24.1	165.2	124.2	788.5	536.8	492.7	391.2	227.2	169.7	49.5
3998	7.4	11.0	21.0	171.1	95.3	430.3	362.6	501.6	241.1	187.5	112.9	9.4
3999	3.9	40.1	49.9	49.3	119.3	1042.7	830.2	369.7	318.6	259.9	154.9	17.0
4000	4.6	10.3	17.9	95.7	251.0	454.4	677.8	733.9	298.8	355.5	99.5	47.2
4001	3.1	5.8	50.1	214.1	201.8	563.6	406.0	252.2	292.9	308.1	223.6	79.4

115 rows × 12 columns

In [18]:
```
plt.hist(a1)
plt.show()
```

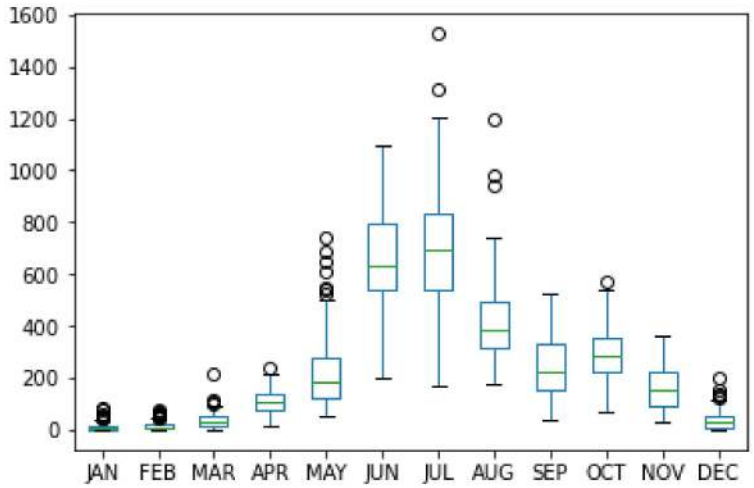


In [19]:
```
plt.plot(a1)
plt.show()
```



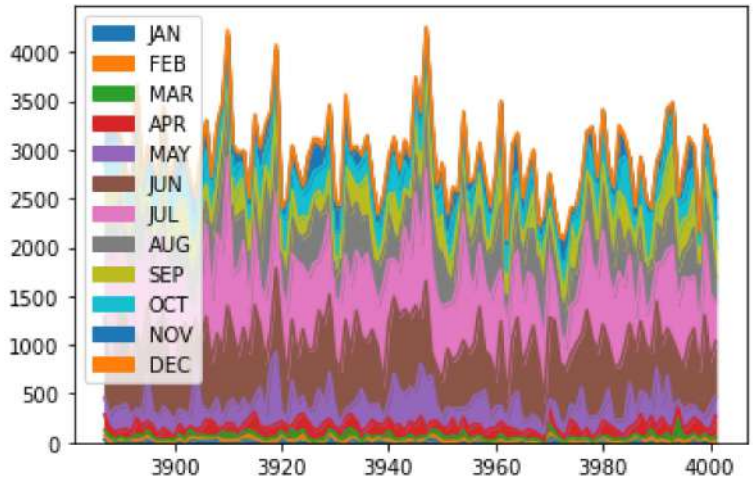
In [20]:
```
a1.plot.box()
```

Out[20]: <AxesSubplot:>



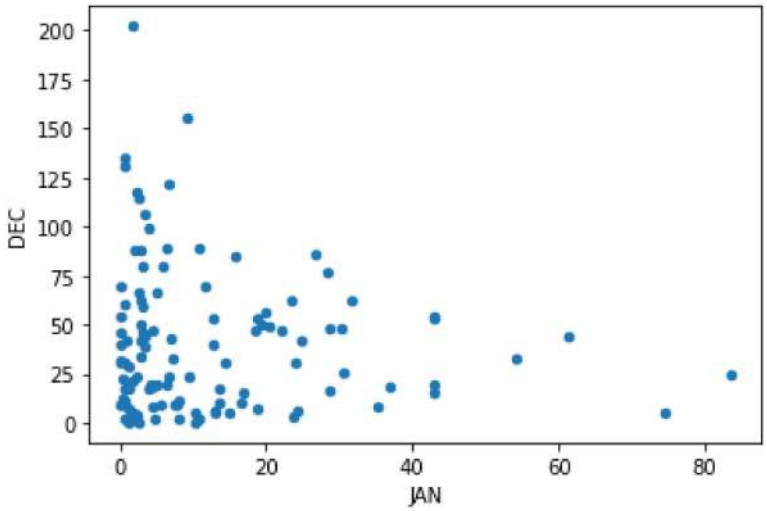
In [21]:
```
a1.plot.area()
```

Out[21]: <AxesSubplot:>



In [22]:
```
a1.plot.scatter('JAN','DEC')
```

Out[22]: <AxesSubplot:xlabel='JAN', ylabel='DEC'>



UTTARAKHAND

In [23]:
```
a1=df[df['SUBDIVISION']=='UTTARAKHAND']
a1
```

Out[23]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1242	1242	UTTARAKHAND	1901	134.5	81.4	44.5	5.9	60.8	33.6	381.1	612.3	167.1
1243	1243	UTTARAKHAND	1902	0.0	17.0	52.2	63.7	52.1	113.1	444.1	327.5	220.4
1244	1244	UTTARAKHAND	1903	68.0	7.9	87.6	10.3	37.5	83.0	251.6	442.7	249.3
1245	1245	UTTARAKHAND	1904	40.0	5.2	78.3	13.6	61.1	180.1	449.6	417.2	174.1
1246	1246	UTTARAKHAND	1905	115.4	80.7	99.8	26.1	70.3	111.5	299.9	349.5	129.5
...	...	...	...	...	...	...	...	...	...	...	...	...
1352	1352	UTTARAKHAND	2011	30.9	65.2	18.0	30.9	84.2	223.1	433.3	523.7	148.4
1353	1353	UTTARAKHAND	2012	38.8	11.9	28.1	39.2	9.1	46.0	387.1	419.5	220.6
1354	1354	UTTARAKHAND	2013	73.0	188.3	22.0	24.7	18.2	488.9	413.4	359.4	111.3
1355	1355	UTTARAKHAND	2014	45.9	99.9	68.4	37.6	52.9	62.9	462.7	264.2	107.9
1356	1356	UTTARAKHAND	2015	54.5	62.6	127.3	57.3	38.0	186.6	337.0	305.3	52.6

115 rows × 20 columns

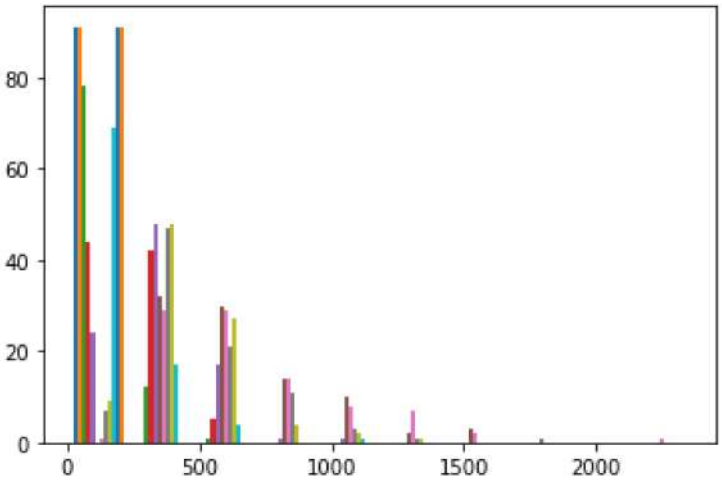
In [24]:
```
a1=a1.drop(['YEAR','SUBDIVISION','index','ANNUAL', 'Jan-Feb','Mar-May', 'Jun-S
a1
```

Out[24]:

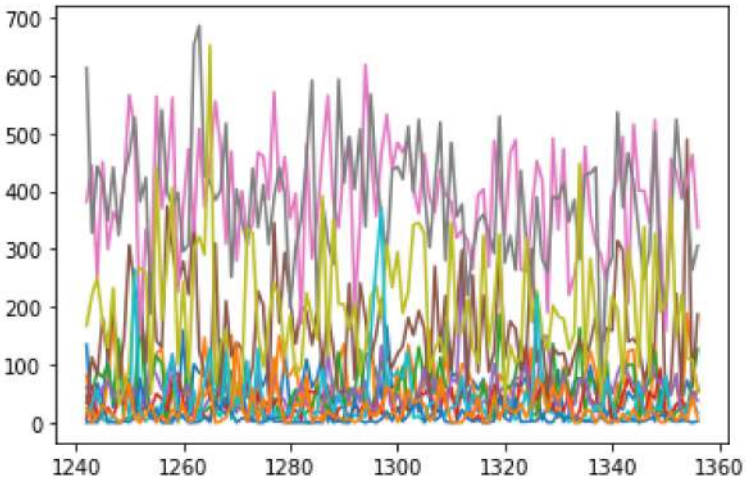
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1242	134.5	81.4	44.5	5.9	60.8	33.6	381.1	612.3	167.1	16.3	0.0	24.9
1243	0.0	17.0	52.2	63.7	52.1	113.1	444.1	327.5	220.4	31.9	2.1	0.0
1244	68.0	7.9	87.6	10.3	37.5	83.0	251.6	442.7	249.3	57.5	0.0	11.3
1245	40.0	5.2	78.3	13.6	61.1	180.1	449.6	417.2	174.1	6.3	35.6	31.0
1246	115.4	80.7	99.8	26.1	70.3	111.5	299.9	349.5	129.5	0.0	1.0	18.5
...	...	...	...	...	...	...	...	...	...	...	...	...
1352	30.9	65.2	18.0	30.9	84.2	223.1	433.3	523.7	148.4	3.4	1.2	2.3
1353	38.8	11.9	28.1	39.2	9.1	46.0	387.1	419.5	220.6	4.7	3.4	15.5
1354	73.0	188.3	22.0	24.7	18.2	488.9	413.4	359.4	111.3	29.1	3.2	3.8
1355	45.9	99.9	68.4	37.6	52.9	62.9	462.7	264.2	107.9	40.8	0.0	44.3
1356	54.5	62.6	127.3	57.3	38.0	186.6	337.0	305.3	52.6	16.8	2.4	7.2

115 rows × 12 columns

In [226]:
```
plt.hist(a1)
plt.show()
```

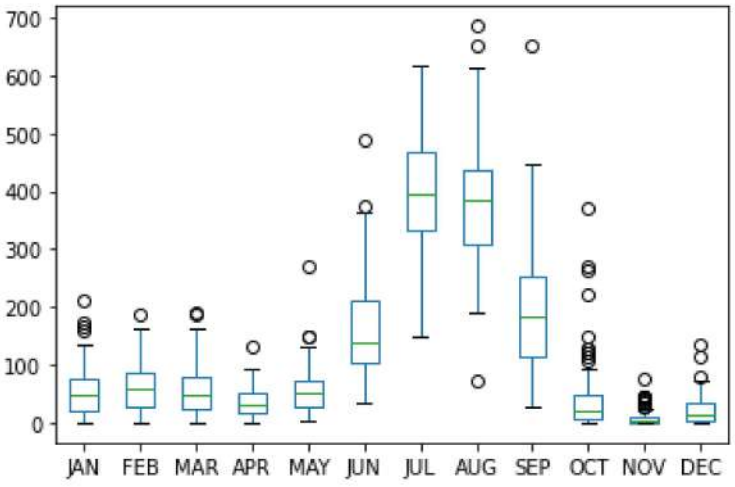


In [25]:
```
plt.plot(a1)
plt.show()
```



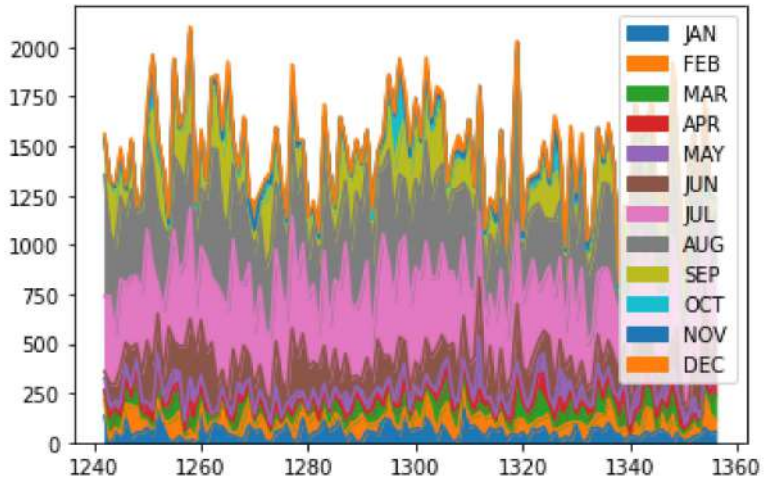
In [26]:
```
a1.plot.box()
```

Out[26]: <AxesSubplot:>



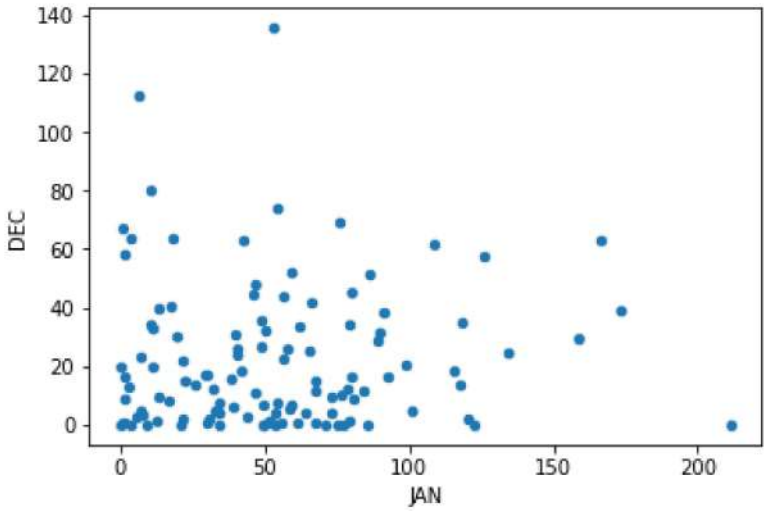
In [27]:
```
a1.plot.area()
```

Out[27]: <AxesSubplot:>



In [28]:
```
a1.plot.scatter('JAN','DEC')
```

Out[28]: <AxesSubplot:xlabel='JAN', ylabel='DEC'>



NORTH INTERIOR KARNATAKA

In [29]:
```
a1=df[df['SUBDIVISION']=='NORTH INTERIOR KARNATAKA']
a1
```

Out[29]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OC
3657	3657	NORTH INTERIOR KARNATAKA	1901	3.5	18.8	7.1	67.2	65.5	120.5	151.9	115.1	128.8	80.
3658	3658	NORTH INTERIOR KARNATAKA	1902	0.0	0.0	0.3	22.5	34.4	111.3	83.2	78.1	146.7	118.
3659	3659	NORTH INTERIOR KARNATAKA	1903	3.5	0.0	0.1	6.9	53.4	102.8	209.4	146.4	189.3	166.
3660	3660	NORTH INTERIOR KARNATAKA	1904	0.2	0.3	8.5	11.0	46.3	120.6	91.6	48.5	165.1	86.
3661	3661	NORTH INTERIOR KARNATAKA	1905	0.0	6.0	2.6	16.0	51.2	99.6	60.1	139.2	42.2	85.
...	...	...	...	...	...	...	...	...	...	...	...	...	...
3767	3767	NORTH INTERIOR KARNATAKA	2011	0.5	7.2	7.2	41.2	46.8	101.3	150.8	152.0	69.0	73.
3768	3768	NORTH INTERIOR KARNATAKA	2012	28.5	6.2	0.4	35.4	19.5	60.0	114.5	105.5	79.2	85.
3769	3769	NORTH INTERIOR KARNATAKA	2013	1.2	6.1	3.0	25.4	47.4	99.4	160.7	73.9	201.0	101.
3770	3770	NORTH INTERIOR KARNATAKA	2014	0.0	6.1	29.2	26.4	93.0	50.4	136.8	205.2	90.2	80.
3771	3771	NORTH INTERIOR KARNATAKA	2015	2.4	0.0	27.5	50.8	45.3	89.6	38.5	78.4	150.8	61.

115 rows × 20 columns

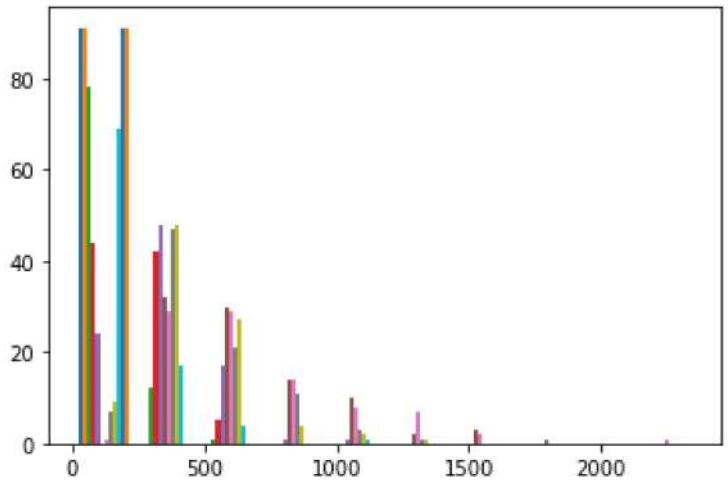
In [30]:
```
a1=a1.drop(['YEAR','SUBDIVISION','index','ANNUAL', 'Jan-Feb','Mar-May', 'Jun-S
a1
```

Out[30]:

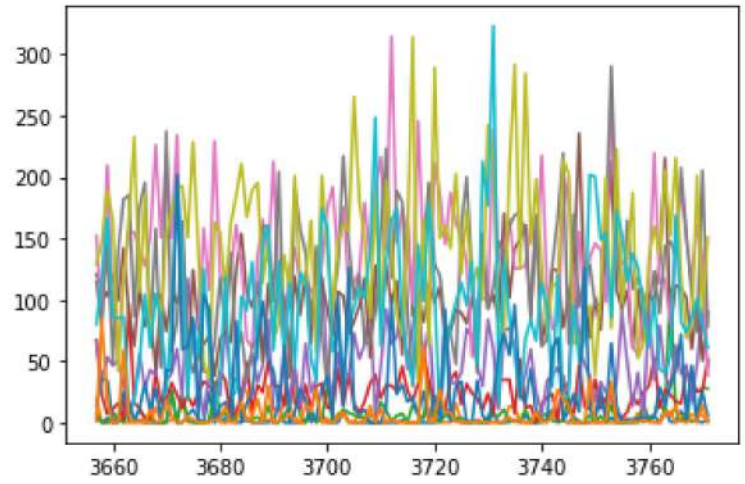
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
3657	3.5	18.8	7.1	67.2	65.5	120.5	151.9	115.1	128.8	80.0	13.6	0.9
3658	0.0	0.0	0.3	22.5	34.4	111.3	83.2	78.1	146.7	118.8	35.7	85.1
3659	3.5	0.0	0.1	6.9	53.4	102.8	209.4	146.4	189.3	166.4	34.3	16.0
3660	0.2	0.3	8.5	11.0	46.3	120.6	91.6	48.5	165.1	86.5	0.0	0.0
3661	0.0	6.0	2.6	16.0	51.2	99.6	60.1	139.2	42.2	85.0	4.4	0.0
...	...	...	...	...	...	...	...	...	...	...	...	...
3767	0.5	7.2	7.2	41.2	46.8	101.3	150.8	152.0	69.0	73.4	5.7	0.0
3768	28.5	6.2	0.4	35.4	19.5	60.0	114.5	105.5	79.2	85.2	46.5	2.9
3769	1.2	6.1	3.0	25.4	47.4	99.4	160.7	73.9	201.0	101.0	4.2	0.1
3770	0.0	6.1	29.2	26.4	93.0	50.4	136.8	205.2	90.2	80.3	25.0	14.1
3771	2.4	0.0	27.5	50.8	45.3	89.6	38.5	78.4	150.8	61.2	5.7	1.7

115 rows × 12 columns

In [227]:
```
plt.hist(a1)
plt.show()
```

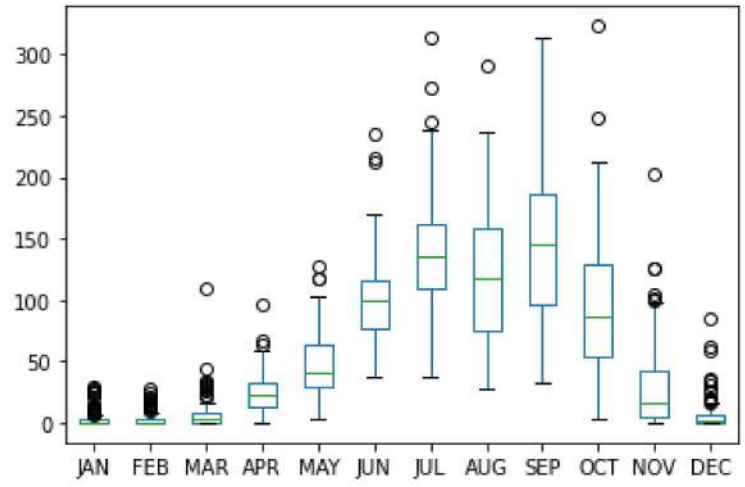


In [31]:
```
plt.plot(a1)
plt.show()
```



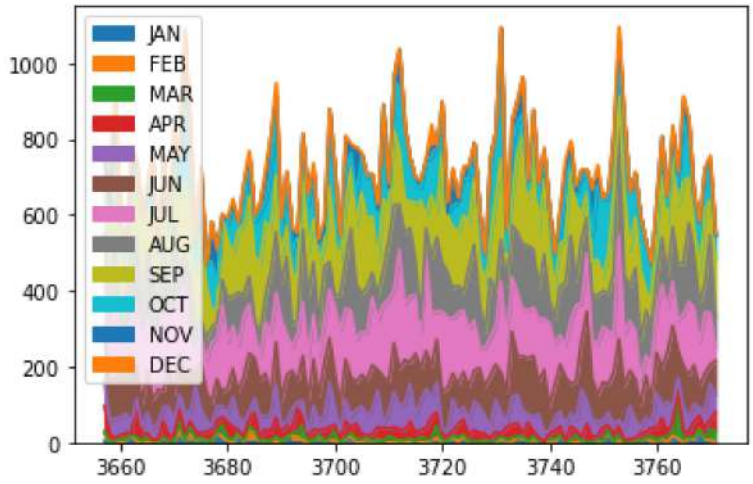
In [32]:
```
a1.plot.box()
```

Out[32]: <AxesSubplot:>



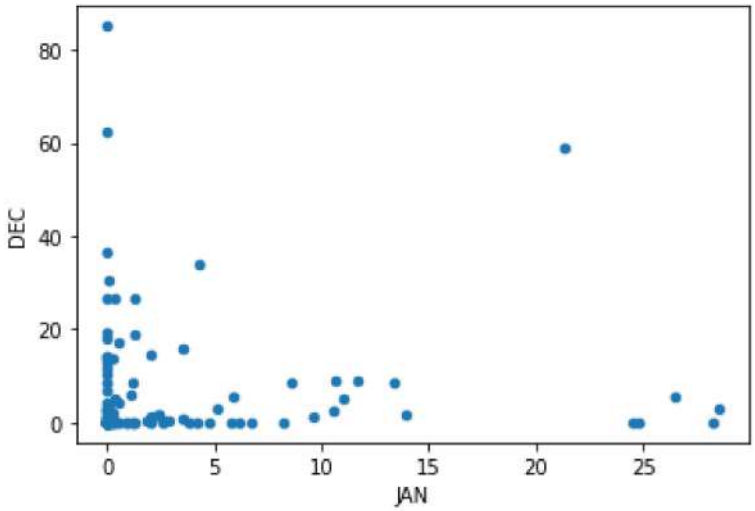
In [33]:
```
a1.plot.area()
```

Out[33]: <AxesSubplot:>



In [34]:
```
a1.plot.scatter('JAN','DEC')
```

Out[34]: <AxesSubplot:xlabel='JAN', ylabel='DEC'>



COASTAL KARNATAKA

In [35]:
```
a1=df[df['SUBDIVISION']=='COASTAL KARNATAKA']
a1
```

Out[35]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
3542	3542	COASTAL KARNATAKA	1901	1.8	0.6	10.7	52.4	81.6	960.9	991.2	606.4	108.0
3543	3543	COASTAL KARNATAKA	1902	3.2	0.3	4.9	10.2	54.6	698.4	1401.6	454.2	708.4
3544	3544	COASTAL KARNATAKA	1903	0.7	0.0	0.0	4.1	202.8	536.5	1405.5	593.8	304.4
3545	3545	COASTAL KARNATAKA	1904	2.4	0.0	4.8	23.7	93.2	1108.2	1070.0	465.6	245.3
3546	3546	COASTAL KARNATAKA	1905	0.0	0.2	0.0	6.4	83.1	767.3	777.3	586.9	172.9
...	...	...	...	...	...	...	...	...	...	...	...	...
3651	3651	COASTAL KARNATAKA	2010	14.4	0.4	3.5	62.2	80.2	682.7	1200.2	637.5	468.4
3652	3652	COASTAL KARNATAKA	2011	4.8	3.8	8.7	66.1	49.3	1018.4	1080.5	861.3	545.2
3654	3654	COASTAL KARNATAKA	2013	2.4	19.6	19.0	28.5	100.4	1153.0	1515.3	680.2	379.1
3655	3655	COASTAL KARNATAKA	2014	0.0	0.3	1.9	40.5	181.9	507.0	1155.4	1121.0	379.3
3656	3656	COASTAL KARNATAKA	2015	1.4	1.0	32.3	72.2	150.3	735.3	930.9	575.2	260.3

114 rows × 20 columns

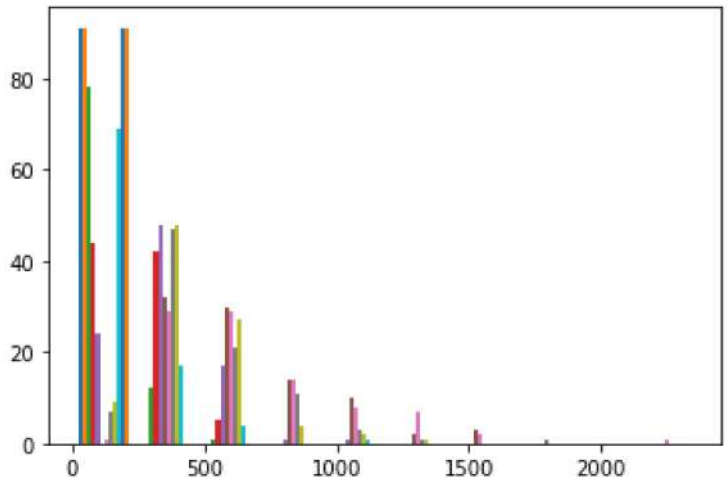
In [36]:
```
a1=a1.drop(['YEAR','SUBDIVISION','index','ANNUAL', 'Jan-Feb','Mar-May', 'Jun-S
a1
```

Out[36]:

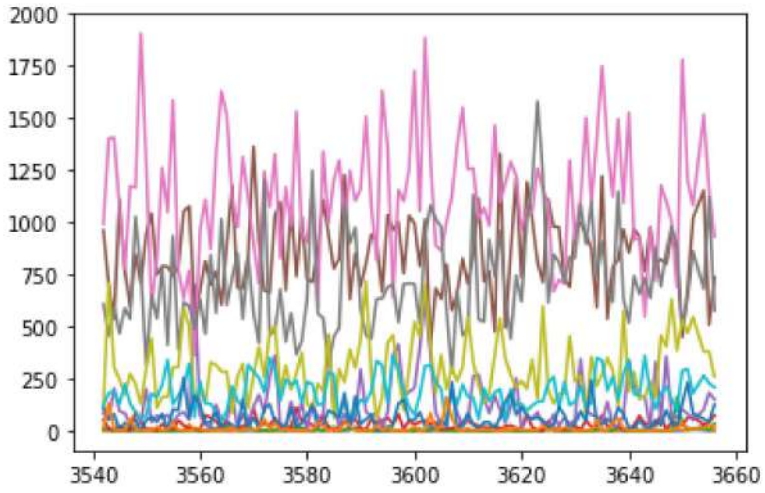
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
3542	1.8	0.6	10.7	52.4	81.6	960.9	991.2	606.4	108.0	120.5	104.9	17.8
3543	3.2	0.3	4.9	10.2	54.6	698.4	1401.6	454.2	708.4	180.4	50.8	132.2
3544	0.7	0.0	0.0	4.1	202.8	536.5	1405.5	593.8	304.4	185.0	79.3	5.3
3545	2.4	0.0	4.8	23.7	93.2	1108.2	1070.0	465.6	245.3	127.2	0.7	0.0
3546	0.0	0.2	0.0	6.4	83.1	767.3	777.3	586.9	172.9	222.2	36.1	0.0
...	...	...	...	...	...	...	...	...	...	...	...	...
3651	14.4	0.4	3.5	62.2	80.2	682.7	1200.2	637.5	468.4	294.7	231.5	11.0
3652	4.8	3.8	8.7	66.1	49.3	1018.4	1080.5	861.3	545.2	178.8	81.5	10.2
3654	2.4	19.6	19.0	28.5	100.4	1153.0	1515.3	680.2	379.1	265.1	56.9	10.0
3655	0.0	0.3	1.9	40.5	181.9	507.0	1155.4	1121.0	379.3	226.4	40.0	30.8
3656	1.4	1.0	32.3	72.2	150.3	735.3	930.9	575.2	260.3	208.5	124.2	14.3

114 rows × 12 columns

In [228]:
```
plt.hist(a1)
plt.show()
```

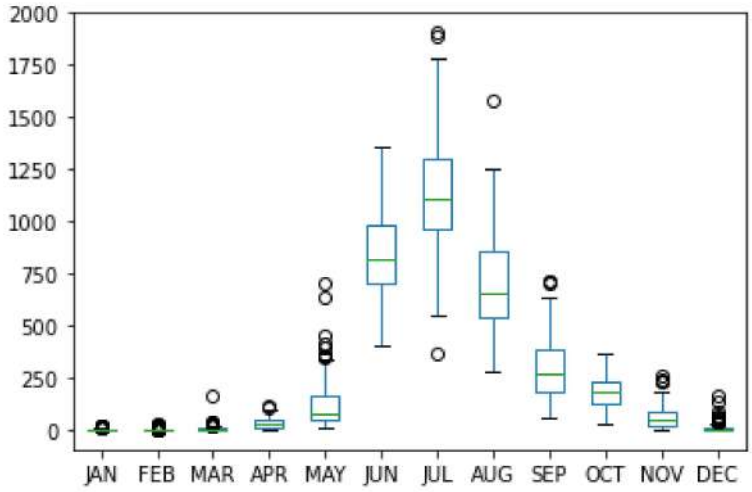


In [37]:
```
plt.plot(a1)
plt.show()
```



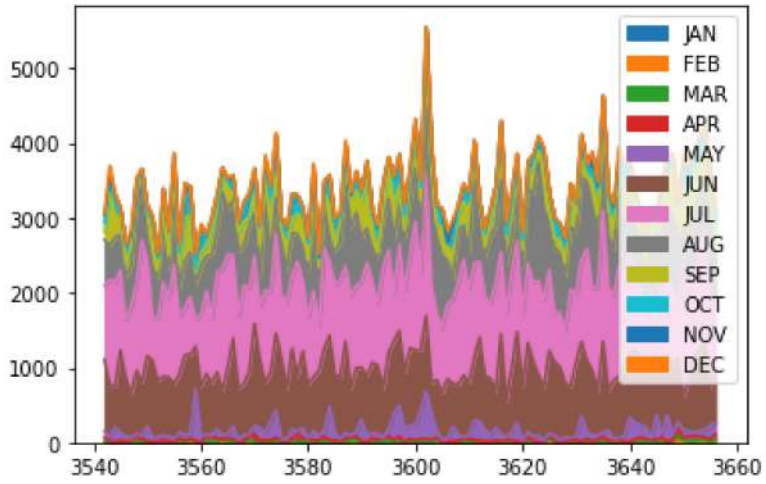
In [38]:
```
a1.plot.box()
```

Out[38]: <AxesSubplot:>



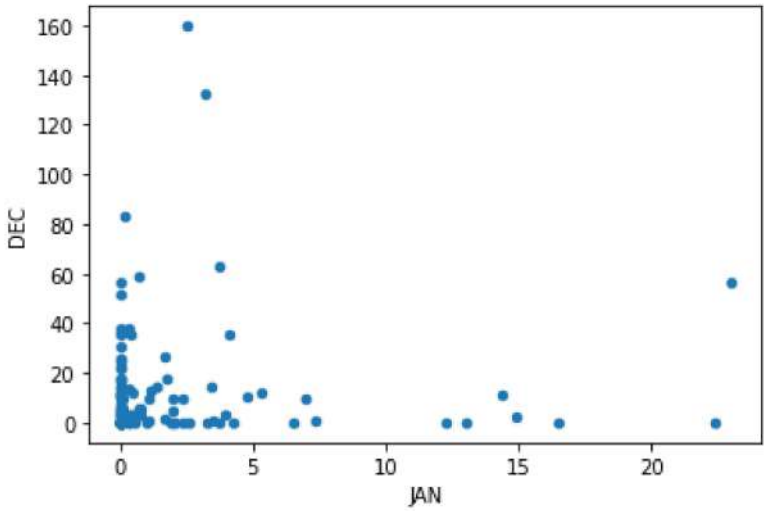
In [39]:
```
a1.plot.area()
```

Out[39]: <AxesSubplot:>



In [40]:
```
a1.plot.scatter('JAN','DEC')
```

Out[40]: <AxesSubplot:xlabel='JAN', ylabel='DEC'>



EAST MADHYA PRADESH

In [41]:
```
a1=df[df['SUBDIVISION']=='EAST MADHYA PRADESH']
a1
```

Out[41]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OC
2162	2162	EAST MADHYA PRADESH	1901	48.5	38.1	15.7	10.7	6.2	61.0	367.5	589.2	189.9	5.
2163	2163	EAST MADHYA PRADESH	1902	14.9	8.9	0.0	3.6	2.7	28.0	411.9	227.0	236.6	17.
2164	2164	EAST MADHYA PRADESH	1903	5.6	2.9	0.3	0.9	37.5	67.5	261.4	366.7	257.4	177.
2165	2165	EAST MADHYA PRADESH	1904	2.0	15.3	48.2	0.0	8.6	109.9	443.2	316.6	135.6	44.
2166	2166	EAST MADHYA PRADESH	1905	15.9	8.0	14.3	12.3	10.2	34.4	292.4	243.3	250.9	2.
...	...	...	...	...	...	...	...	...	...	...	...	...	...
2272	2272	EAST MADHYA PRADESH	2011	0.6	1.9	0.3	7.1	4.7	332.5	323.6	326.9	276.5	1.
2273	2273	EAST MADHYA PRADESH	2012	39.4	0.7	0.6	1.1	1.2	67.8	398.9	351.7	172.6	12.
2274	2274	EAST MADHYA PRADESH	2013	2.0	43.4	14.1	9.5	0.3	311.9	456.2	480.8	78.0	124.
2275	2275	EAST MADHYA PRADESH	2014	32.1	49.7	17.8	5.1	2.5	91.8	283.4	231.8	139.6	56.
2276	2276	EAST MADHYA PRADESH	2015	37.3	11.0	73.4	25.8	6.3	139.2	262.2	272.1	71.6	38.

115 rows × 20 columns

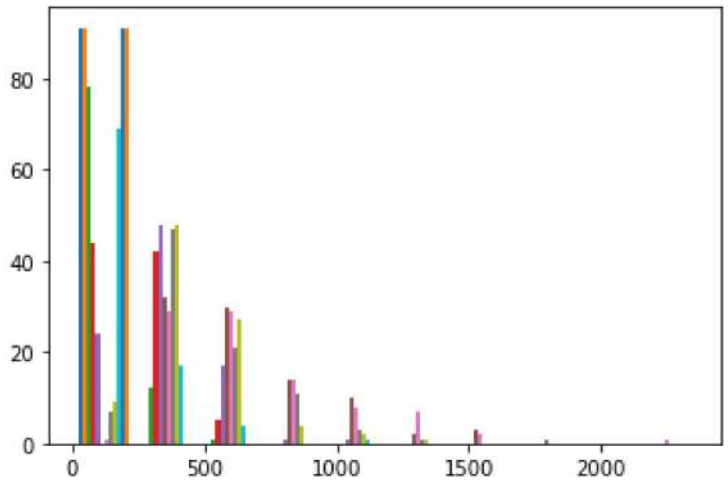
In [42]:
```
a1=a1.drop(['YEAR','SUBDIVISION','index','ANNUAL', 'Jan-Feb','Mar-May', 'Jun-S
a1
```

Out[42]:

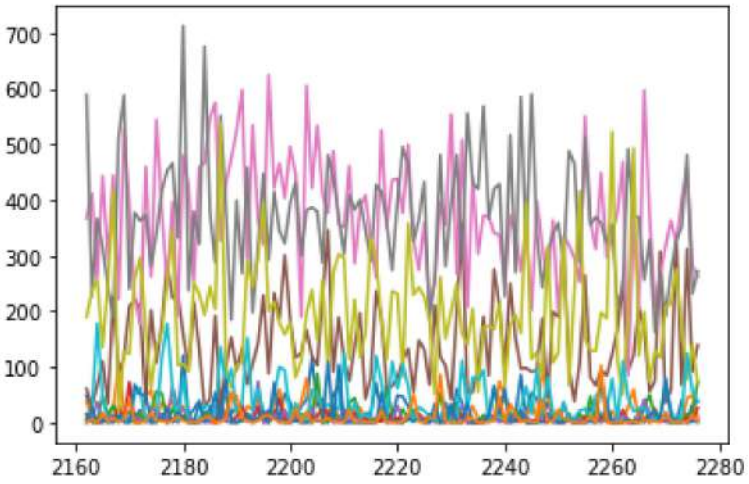
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2162	48.5	38.1	15.7	10.7	6.2	61.0	367.5	589.2	189.9	5.9	0.0	0.0
2163	14.9	8.9	0.0	3.6	2.7	28.0	411.9	227.0	236.6	17.0	27.6	6.1
2164	5.6	2.9	0.3	0.9	37.5	67.5	261.4	366.7	257.4	177.9	0.0	0.0
2165	2.0	15.3	48.2	0.0	8.6	109.9	443.2	316.6	135.6	44.8	3.2	16.9
2166	15.9	8.0	14.3	12.3	10.2	34.4	292.4	243.3	250.9	2.9	0.0	1.6
...	...	...	...	...	...	...	...	...	...	...	...	...
2272	0.6	1.9	0.3	7.1	4.7	332.5	323.6	326.9	276.5	1.1	0.0	0.0
2273	39.4	0.7	0.6	1.1	1.2	67.8	398.9	351.7	172.6	12.7	3.8	2.7
2274	2.0	43.4	14.1	9.5	0.3	311.9	456.2	480.8	78.0	124.2	0.5	1.0
2275	32.1	49.7	17.8	5.1	2.5	91.8	283.4	231.8	139.6	56.4	1.9	12.9
2276	37.3	11.0	73.4	25.8	6.3	139.2	262.2	272.1	71.6	38.2	1.2	0.9

115 rows × 12 columns

In [229]:
```
plt.hist(a1)
plt.show()
```

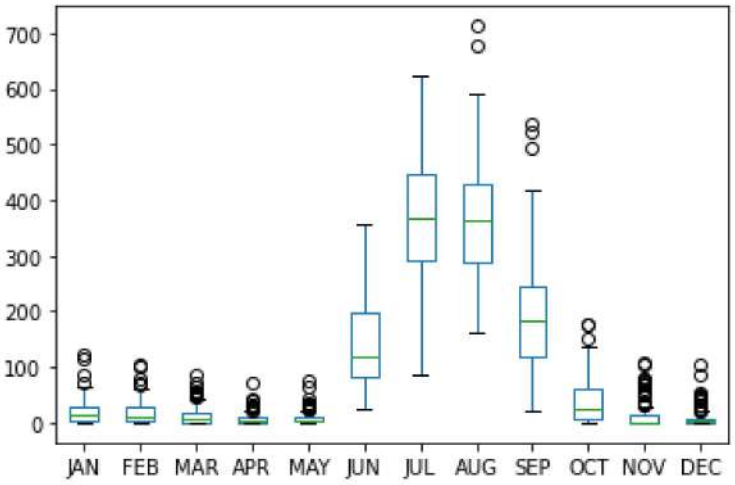


In [43]:
```
plt.plot(a1)
plt.show()
```



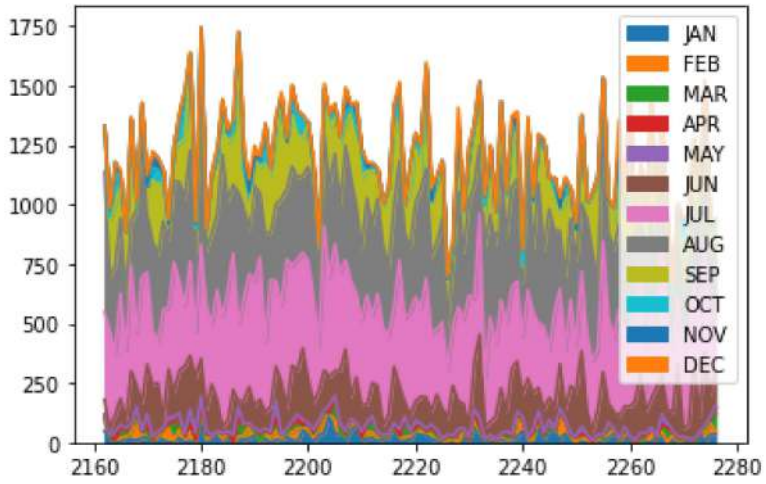
In [44]:
```
a1.plot.box()
```

Out[44]: <AxesSubplot:>



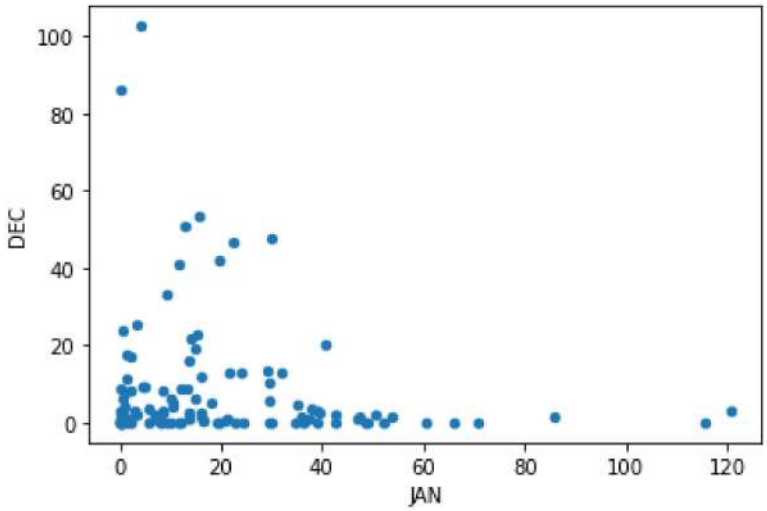
In [45]:
```
a1.plot.area()
```

Out[45]: <AxesSubplot:>



In [46]:
```
a1.plot.scatter('JAN','DEC')
```

Out[46]: <AxesSubplot:xlabel='JAN', ylabel='DEC'>



HARYANA DELHI & CHANDIGARH

In [47]:
```
a1=df[df['SUBDIVISION']=='HARYANA DELHI & CHANDIGARH']
a1
```

Out[47]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
1357	1357	HARYANA DELHI & CHANDIGARH	1901	35.4	28.9	11.1	0.0	5.1	13.2	126.4	151.5	10.5	2.0
1358	1358	HARYANA DELHI & CHANDIGARH	1902	0.0	0.7	2.9	10.2	15.8	74.6	149.3	97.1	59.8	9.3
1359	1359	HARYANA DELHI & CHANDIGARH	1903	14.7	0.5	2.3	0.5	8.5	8.6	151.6	138.2	97.7	4.0
1360	1360	HARYANA DELHI & CHANDIGARH	1904	7.6	0.7	48.0	0.5	29.3	34.3	109.7	162.9	102.3	1.5
1361	1361	HARYANA DELHI & CHANDIGARH	1905	44.8	20.8	14.0	1.3	7.4	20.1	93.6	23.1	92.6	0.0
...	...	...	...	...	...	...	...	...	...	...	...	...	...
1467	1467	HARYANA DELHI & CHANDIGARH	2011	0.7	26.7	6.9	8.9	28.7	94.4	85.0	127.3	133.1	0.0
1468	1468	HARYANA DELHI & CHANDIGARH	2012	8.2	0.2	0.1	11.8	3.8	5.3	68.1	196.6	90.7	2.4
1469	1469	HARYANA DELHI & CHANDIGARH	2013	21.1	52.2	5.3	3.3	1.4	62.1	96.5	161.9	42.8	10.9
1470	1470	HARYANA DELHI & CHANDIGARH	2014	13.0	17.3	26.8	7.5	20.3	25.9	72.3	34.8	67.3	10.5
1471	1471	HARYANA DELHI & CHANDIGARH	2015	12.4	6.6	71.8	34.8	8.4	43.7	130.3	89.2	32.1	3.7

115 rows × 20 columns

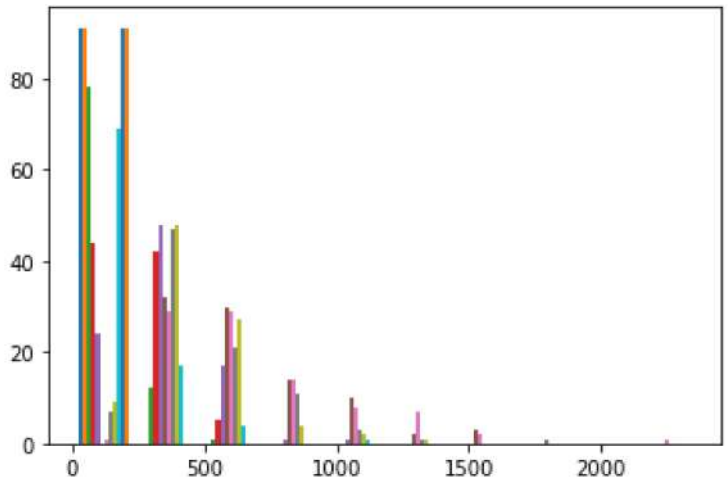
In [48]:
```
a1=a1.drop(['YEAR','SUBDIVISION','index','ANNUAL', 'Jan-Feb','Mar-May', 'Jun-S
a1
```

Out[48]:

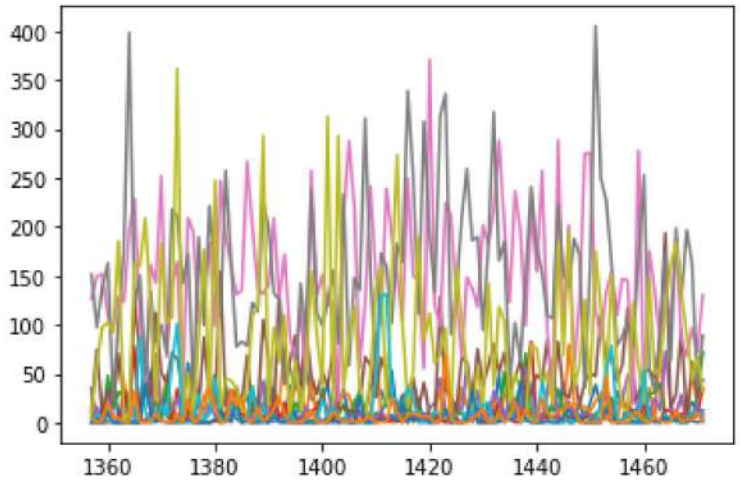
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1357	35.4	28.9	11.1	0.0	5.1	13.2	126.4	151.5	10.5	2.0	0.0	6.1
1358	0.0	0.7	2.9	10.2	15.8	74.6	149.3	97.1	59.8	9.3	0.0	0.0
1359	14.7	0.5	2.3	0.5	8.5	8.6	151.6	138.2	97.7	4.0	0.0	2.3
1360	7.6	0.7	48.0	0.5	29.3	34.3	109.7	162.9	102.3	1.5	10.4	20.3
1361	44.8	20.8	14.0	1.3	7.4	20.1	93.6	23.1	92.6	0.0	0.0	5.1
...	...	...	...	...	...	...	...	...	...	...	...	...
1467	0.7	26.7	6.9	8.9	28.7	94.4	85.0	127.3	133.1	0.0	0.0	0.4
1468	8.2	0.2	0.1	11.8	3.8	5.3	68.1	196.6	90.7	2.4	0.6	3.5
1469	21.1	52.2	5.3	3.3	1.4	62.1	96.5	161.9	42.8	10.9	1.7	2.1
1470	13.0	17.3	26.8	7.5	20.3	25.9	72.3	34.8	67.3	10.5	0.2	9.6
1471	12.4	6.6	71.8	34.8	8.4	43.7	130.3	89.2	32.1	3.7	2.3	0.2

115 rows × 12 columns

In [230]:
```
plt.hist(a1)
plt.show()
```

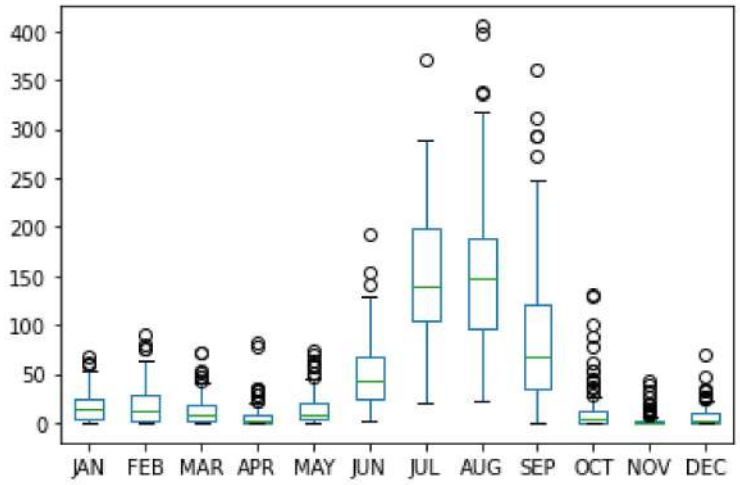


In [49]:
```
plt.plot(a1)
plt.show()
```



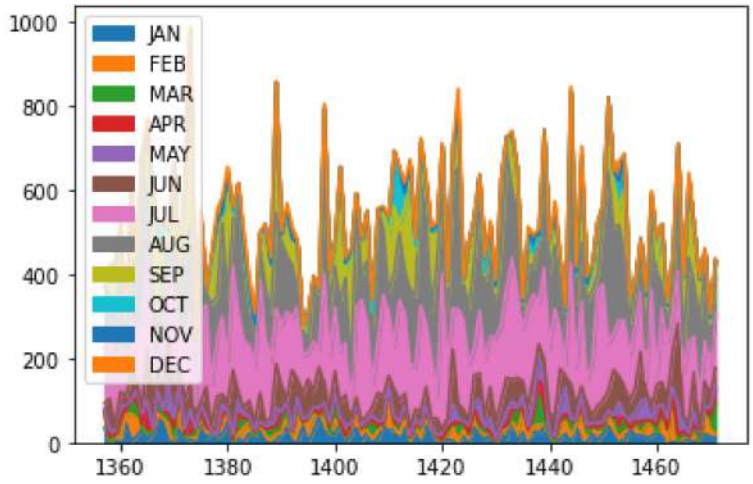
In [50]:
```
a1.plot.box()
```

Out[50]: <AxesSubplot:>



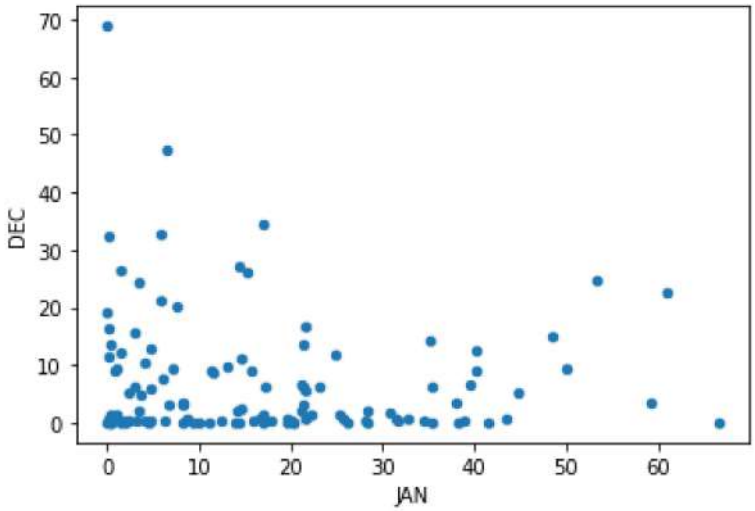
In [51]:
```
a1.plot.area()
```

Out[51]: <AxesSubplot:>



In [52]:
```
a1.plot.scatter('JAN','DEC')
```

Out[52]: <AxesSubplot:xlabel='JAN', ylabel='DEC'>



SAURASHTRA & KUTCH

In [53]:
```
a1=df[df['SUBDIVISION']=='SAURASHTRA & KUTCH']
a1
```

Out[53]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
2392	2392	SAURASHTRA & KUTCH	1901	1.9	0.0	0.1	0.2	3.2	9.1	87.8	62.5	12.0	3.8
2393	2393	SAURASHTRA & KUTCH	1902	0.1	0.0	0.0	0.5	1.1	14.4	92.9	160.0	123.9	1.5
2394	2394	SAURASHTRA & KUTCH	1903	0.5	0.0	1.7	0.0	3.1	10.5	337.9	96.1	61.9	11.1
2395	2395	SAURASHTRA & KUTCH	1904	1.4	5.8	17.5	0.0	0.0	9.5	111.2	9.4	28.9	0.3
2396	2396	SAURASHTRA & KUTCH	1905	1.5	1.0	0.6	0.4	0.0	6.4	254.5	12.3	12.8	0.4
...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
2502	2502	SAURASHTRA & KUTCH	2011	0.0	1.4	0.0	0.0	0.0	26.0	212.7	290.9	210.1	1.2
2503	2503	SAURASHTRA & KUTCH	2012	0.0	0.0	0.0	0.2	0.1	22.4	34.7	34.5	228.5	2.4
2504	2504	SAURASHTRA & KUTCH	2013	1.7	0.2	0.1	8.5	0.1	127.7	171.2	83.3	260.2	28.6
2505	2505	SAURASHTRA & KUTCH	2014	0.3	0.0	0.1	0.5	2.1	17.3	137.7	118.8	99.2	5.2
2506	2506	SAURASHTRA & KUTCH	2015	0.9	0.0	4.4	2.1	0.8	112.6	226.7	10.6	79.9	3.3

115 rows × 20 columns

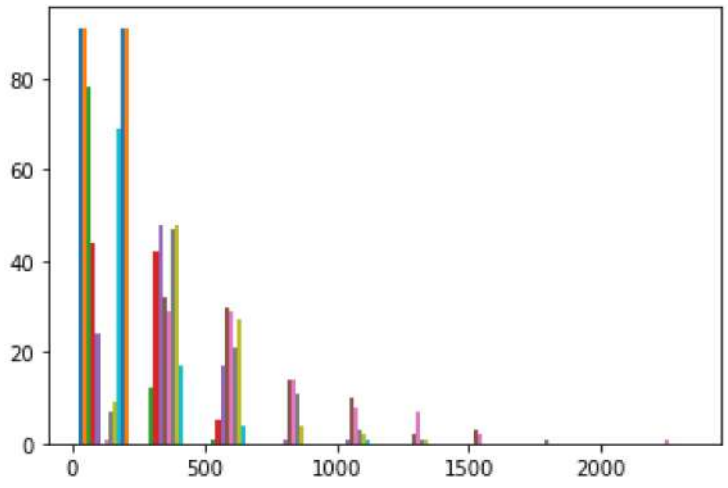
In [54]:
```
a1=a1.drop(['YEAR','SUBDIVISION','index','ANNUAL', 'Jan-Feb','Mar-May', 'Jun-S
a1
```

Out[54]:

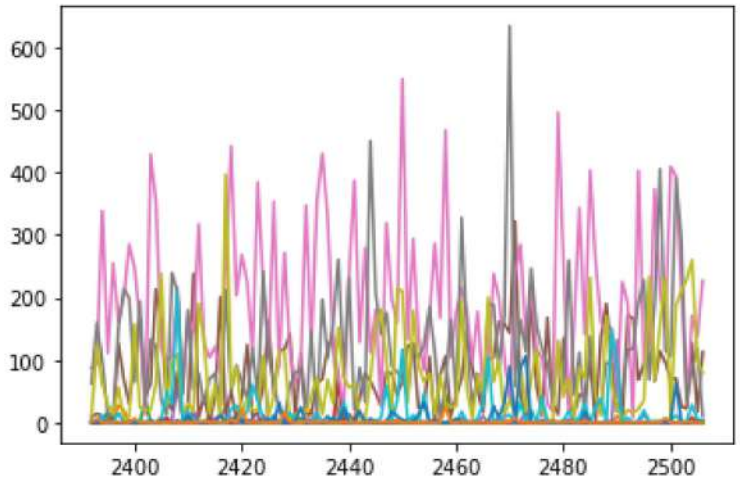
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2392	1.9	0.0	0.1	0.2	3.2	9.1	87.8	62.5	12.0	3.8	0.0	0.7
2393	0.1	0.0	0.0	0.5	1.1	14.4	92.9	160.0	123.9	1.5	0.1	6.5
2394	0.5	0.0	1.7	0.0	3.1	10.5	337.9	96.1	61.9	11.1	0.0	0.0
2395	1.4	5.8	17.5	0.0	0.0	9.5	111.2	9.4	28.9	0.3	1.7	0.0
2396	1.5	1.0	0.6	0.4	0.0	6.4	254.5	12.3	12.8	0.4	0.0	0.0
...	...	...	...	...	...	...	...	...	...	...	...	...
2502	0.0	1.4	0.0	0.0	0.0	26.0	212.7	290.9	210.1	1.2	0.1	0.0
2503	0.0	0.0	0.0	0.2	0.1	22.4	34.7	34.5	228.5	2.4	0.0	1.0
2504	1.7	0.2	0.1	8.5	0.1	127.7	171.2	83.3	260.2	28.6	0.0	0.0
2505	0.3	0.0	0.1	0.5	2.1	17.3	137.7	118.8	99.2	5.2	2.7	0.0
2506	0.9	0.0	4.4	2.1	0.8	112.6	226.7	10.6	79.9	3.3	0.3	0.0

115 rows × 12 columns

In [231]:
```
plt.hist(a1)
plt.show()
```

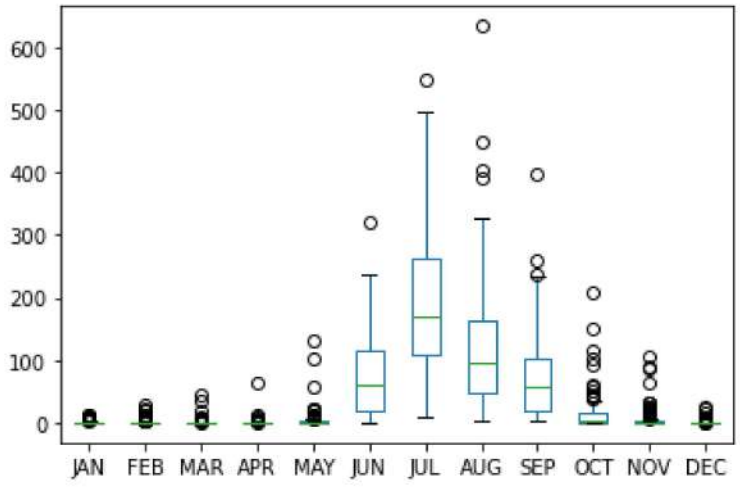


In [55]:
```
plt.plot(a1)
plt.show()
```



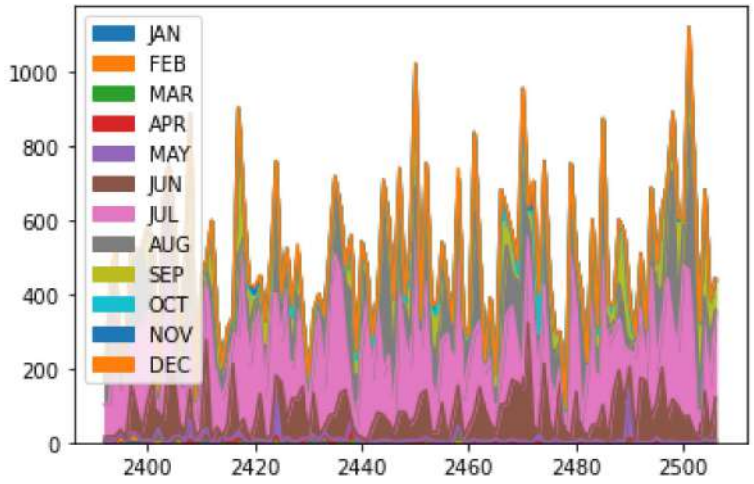
In [56]:
```
a1.plot.box()
```

Out[56]: <AxesSubplot:>



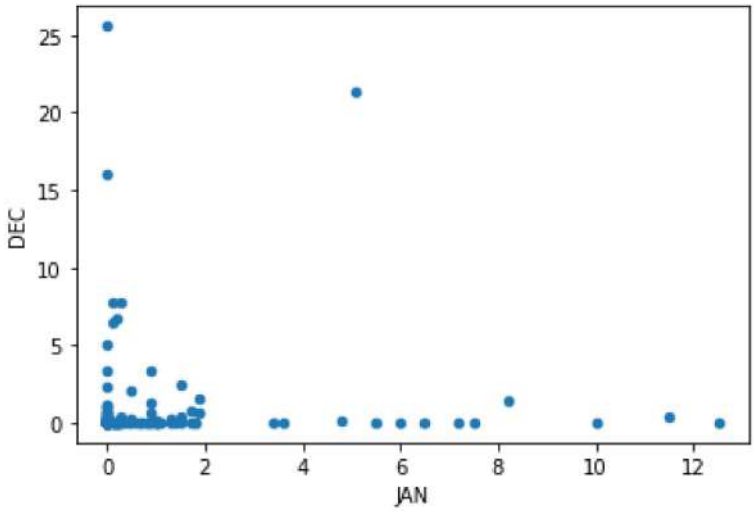
In [57]:
```
a1.plot.area()
```

Out[57]: <AxesSubplot:>



In [58]:
```
a1.plot.scatter('JAN','DEC')
```

Out[58]: <AxesSubplot:xlabel='JAN', ylabel='DEC'>



WEST RAJASTHAN

In [59]:
```
a1=df[df['SUBDIVISION']=='WEST RAJASTHAN']
a1
```

Out[59]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
1817	1817	WEST RAJASTHAN	1901	6.7	0.0	1.1	0.0	6.1	3.0	79.0	59.2	1.0	2.1
1818	1818	WEST RAJASTHAN	1902	0.0	0.0	0.0	0.5	4.0	49.1	27.0	71.3	41.8	1.8
1819	1819	WEST RAJASTHAN	1903	1.7	1.3	5.5	0.0	4.2	2.7	154.8	87.1	49.3	0.1
1820	1820	WEST RAJASTHAN	1904	3.8	2.9	16.3	0.7	11.4	14.6	39.8	45.6	21.4	1.4
1821	1821	WEST RAJASTHAN	1905	6.3	4.8	0.7	1.3	0.3	4.9	30.1	0.6	64.5	0.0
...	...	...	...	...	...	...	...	...	...	...	...	...	...
1927	1927	WEST RAJASTHAN	2011	0.0	11.8	1.5	1.5	7.8	24.4	88.5	166.8	116.3	0.1
1928	1928	WEST RAJASTHAN	2012	0.5	0.0	0.0	9.5	10.4	5.3	40.4	166.7	92.0	1.9
1929	1929	WEST RAJASTHAN	2013	8.6	21.8	4.2	3.1	1.7	37.6	104.5	138.2	58.7	10.1
1930	1930	WEST RAJASTHAN	2014	0.8	2.2	4.7	8.4	23.0	13.8	94.3	69.6	84.9	0.5
1931	1931	WEST RAJASTHAN	2015	1.4	0.9	30.3	25.2	15.5	53.2	234.6	60.5	35.7	1.1

115 rows × 20 columns

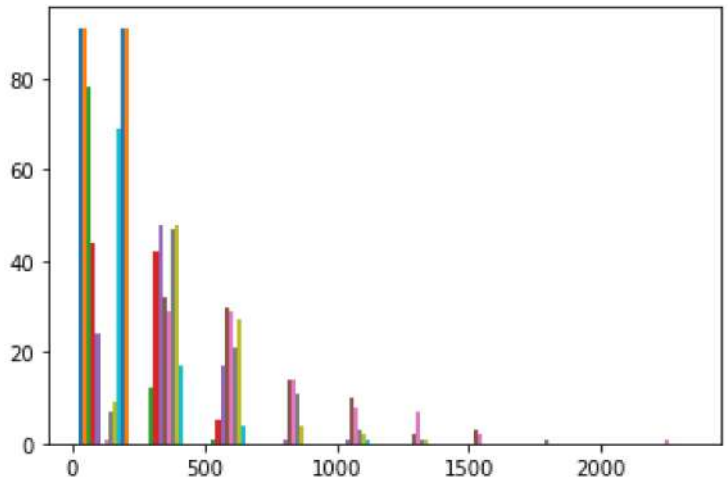
In [60]:
```
a1=a1.drop(['YEAR','SUBDIVISION','index','ANNUAL', 'Jan-Feb','Mar-May', 'Jun-S
a1
```

Out[60]:

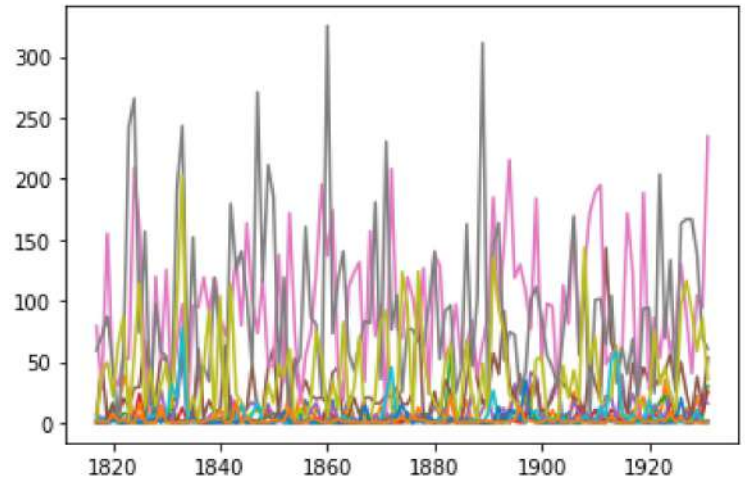
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1817	6.7	0.0	1.1	0.0	6.1	3.0	79.0	59.2	1.0	2.1	0.0	0.6
1818	0.0	0.0	0.0	0.5	4.0	49.1	27.0	71.3	41.8	1.8	0.0	0.0
1819	1.7	1.3	5.5	0.0	4.2	2.7	154.8	87.1	49.3	0.1	0.0	0.5
1820	3.8	2.9	16.3	0.7	11.4	14.6	39.8	45.6	21.4	1.4	2.9	7.1
1821	6.3	4.8	0.7	1.3	0.3	4.9	30.1	0.6	64.5	0.0	0.0	0.9
...	...	...	...	...	...	...	...	...	...	...	...	...
1927	0.0	11.8	1.5	1.5	7.8	24.4	88.5	166.8	116.3	0.1	0.0	0.0
1928	0.5	0.0	0.0	9.5	10.4	5.3	40.4	166.7	92.0	1.9	0.0	0.6
1929	8.6	21.8	4.2	3.1	1.7	37.6	104.5	138.2	58.7	10.1	1.0	0.0
1930	0.8	2.2	4.7	8.4	23.0	13.8	94.3	69.6	84.9	0.5	0.2	0.0
1931	1.4	0.9	30.3	25.2	15.5	53.2	234.6	60.5	35.7	1.1	0.1	0.0

115 rows × 12 columns

In [232]:
```
plt.hist(a1)
plt.show()
```

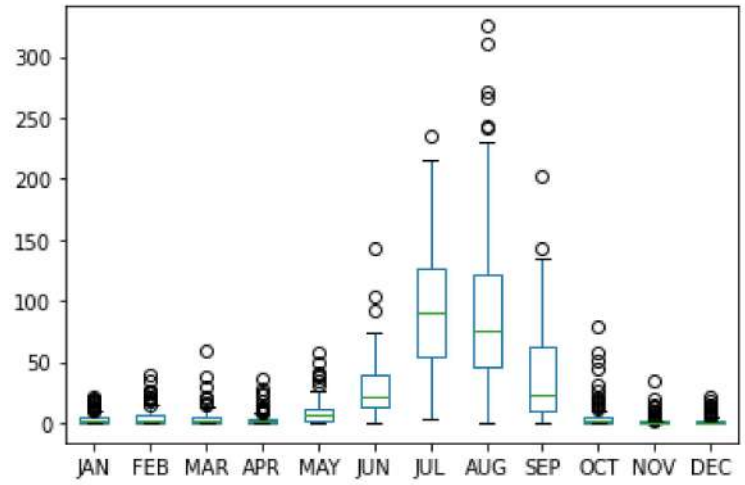


In [61]:
```
plt.plot(a1)
plt.show()
```



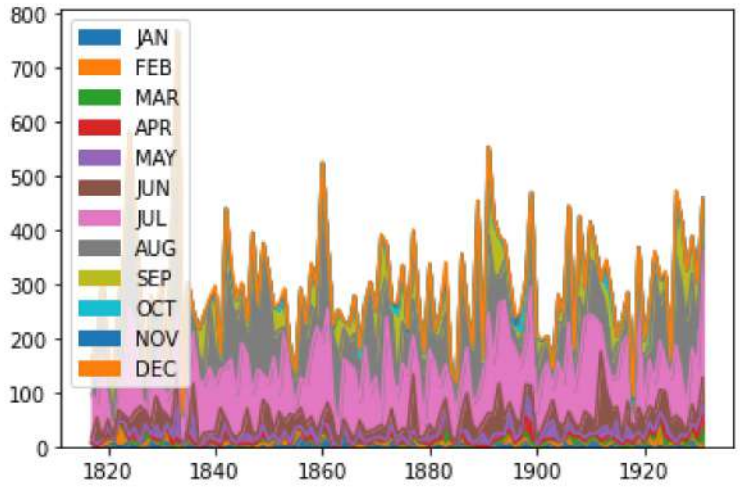
In [62]:
```
a1.plot.box()
```

Out[62]: <AxesSubplot:>



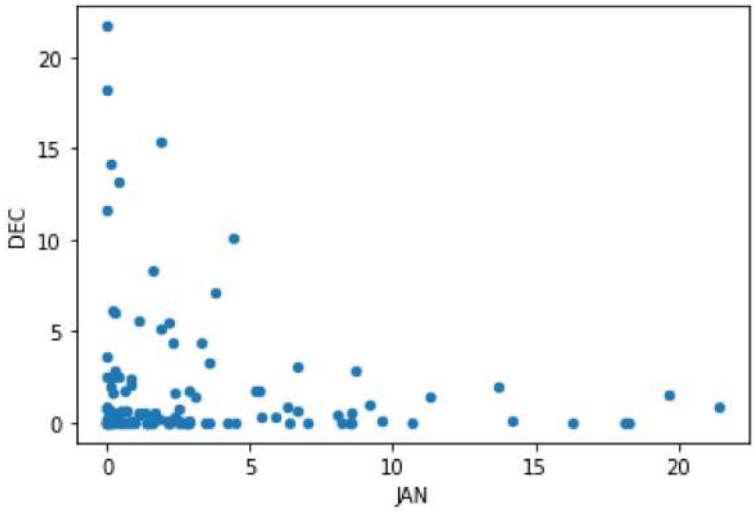
In [63]:
```
a1.plot.area()
```

Out[63]: <AxesSubplot:>



In [64]:
```
a1.plot.scatter('JAN','DEC')
```

Out[64]: <AxesSubplot:xlabel='JAN', ylabel='DEC'>



HIMACHAL PRADESH

In [65]:
```
a1=df[df['SUBDIVISION']=='TAMIL NADU']
a1
```

Out[65]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
3427	3427	TAMIL NADU	1901	24.5	39.1	21.7	36.0	74.0	41.8	49.3	67.9	191.1	122.3
3428	3428	TAMIL NADU	1902	67.2	9.8	25.1	21.9	84.7	39.3	55.1	113.8	98.6	282.2
3429	3429	TAMIL NADU	1903	19.3	7.8	1.7	18.2	128.5	58.5	72.6	115.0	210.4	128.1
3430	3430	TAMIL NADU	1904	35.2	0.1	0.7	19.5	121.9	34.9	89.0	40.4	85.7	163.2
3431	3431	TAMIL NADU	1905	6.5	7.5	17.2	64.8	83.7	49.8	39.0	101.8	73.5	250.4
...	...	...	...	...	...	...	...	...	...	...	...	...	...
3537	3537	TAMIL NADU	2011	4.3	11.2	8.0	91.5	33.4	56.0	45.5	128.9	76.0	200.4
3538	3538	TAMIL NADU	2012	3.0	0.1	2.5	35.5	41.9	30.1	46.5	98.0	84.9	235.2
3539	3539	TAMIL NADU	2013	3.9	30.9	30.0	20.3	42.0	54.6	42.7	110.7	113.5	127.9
3540	3540	TAMIL NADU	2014	7.4	6.1	8.1	8.3	139.1	47.8	50.6	117.7	98.9	252.2
3541	3541	TAMIL NADU	2015	8.3	2.3	21.7	108.8	112.4	62.4	43.5	81.6	98.4	132.6

115 rows × 20 columns

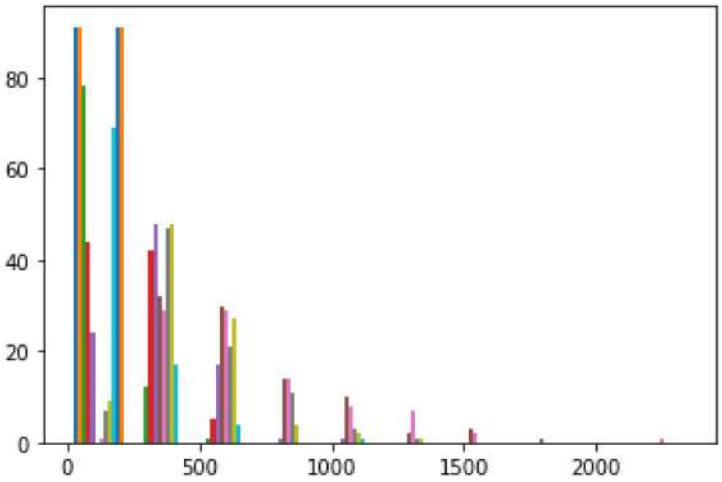
In [66]:
```
a1=a1.drop(['YEAR','SUBDIVISION','index','ANNUAL', 'Jan-Feb','Mar-May', 'Jun-S
a1
```

Out[66]:

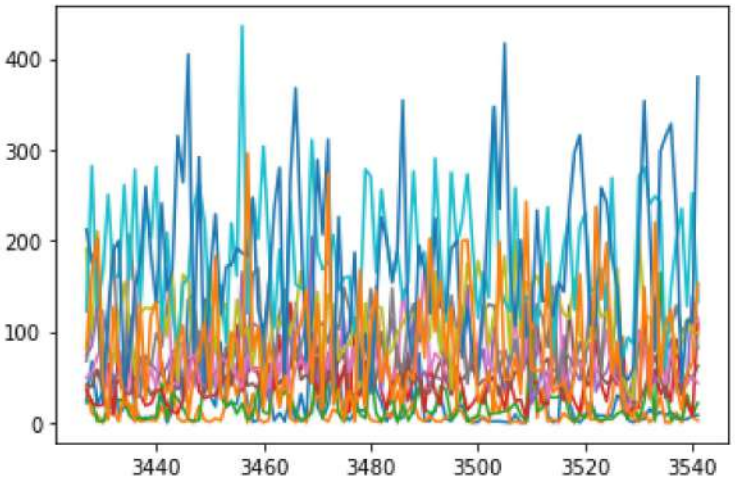
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
3427	24.5	39.1	21.7	36.0	74.0	41.8	49.3	67.9	191.1	122.3	212.3	80.4
3428	67.2	9.8	25.1	21.9	84.7	39.3	55.1	113.8	98.6	282.2	174.9	165.8
3429	19.3	7.8	1.7	18.2	128.5	58.5	72.6	115.0	210.4	128.1	200.5	203.2
3430	35.2	0.1	0.7	19.5	121.9	34.9	89.0	40.4	85.7	163.2	23.6	49.1
3431	6.5	7.5	17.2	64.8	83.7	49.8	39.0	101.8	73.5	250.4	123.7	3.2
...	...	...	...	...	...	...	...	...	...	...	...	...
3537	4.3	11.2	8.0	91.5	33.4	56.0	45.5	128.9	76.0	200.4	230.5	41.0
3538	3.0	0.1	2.5	35.5	41.9	30.1	46.5	98.0	84.9	235.2	44.5	14.0
3539	3.9	30.9	30.0	20.3	42.0	54.6	42.7	110.7	113.5	127.9	112.3	53.2
3540	7.4	6.1	8.1	8.3	139.1	47.8	50.6	117.7	98.9	252.2	110.8	66.0
3541	8.3	2.3	21.7	108.8	112.4	62.4	43.5	81.6	98.4	132.6	379.8	152.8

115 rows × 12 columns

In [233]:
```
plt.hist(a1)
plt.show()
```

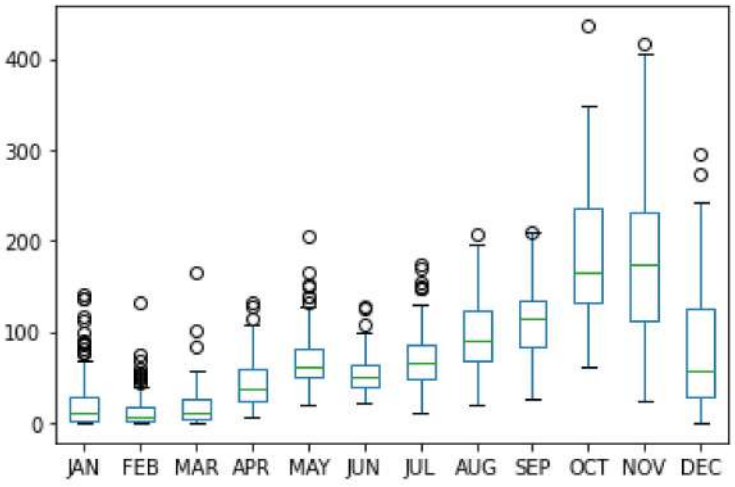


In [67]:
```
plt.plot(a1)
plt.show()
```



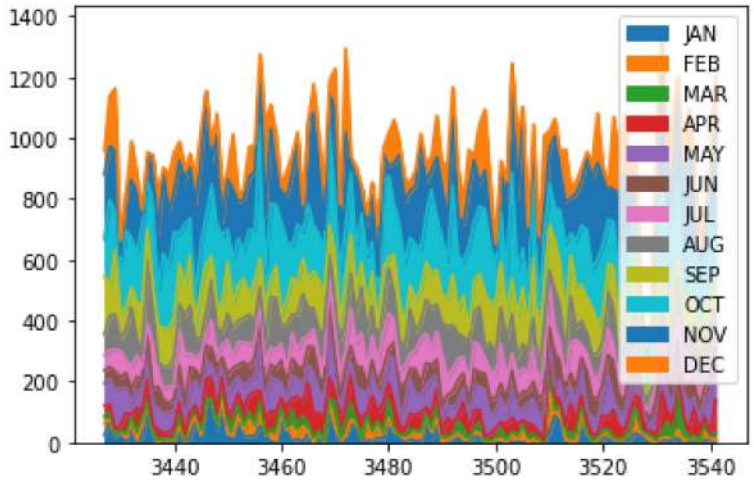
In [68]:
```
a1.plot.box()
```

Out[68]: <AxesSubplot:>



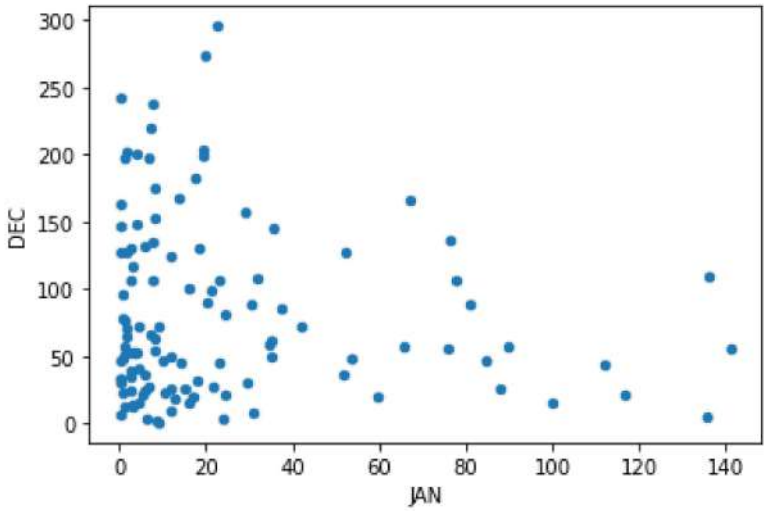
In [69]:
```
a1.plot.area()
```

Out[69]: <AxesSubplot:>



In [70]:
```
a1.plot.scatter('JAN','DEC')
```

Out[70]: <AxesSubplot:xlabel='JAN', ylabel='DEC'>



BIHAR

In [71]:
```
a1=df[df['SUBDIVISION']=='TAMIL NADU']
a1
```

Out[71]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
3427	3427	TAMIL NADU	1901	24.5	39.1	21.7	36.0	74.0	41.8	49.3	67.9	191.1	122.3
3428	3428	TAMIL NADU	1902	67.2	9.8	25.1	21.9	84.7	39.3	55.1	113.8	98.6	282.2
3429	3429	TAMIL NADU	1903	19.3	7.8	1.7	18.2	128.5	58.5	72.6	115.0	210.4	128.1
3430	3430	TAMIL NADU	1904	35.2	0.1	0.7	19.5	121.9	34.9	89.0	40.4	85.7	163.2
3431	3431	TAMIL NADU	1905	6.5	7.5	17.2	64.8	83.7	49.8	39.0	101.8	73.5	250.4
...	...	...	...	...	...	...	...	...	...	...	...	...	...
3537	3537	TAMIL NADU	2011	4.3	11.2	8.0	91.5	33.4	56.0	45.5	128.9	76.0	200.4
3538	3538	TAMIL NADU	2012	3.0	0.1	2.5	35.5	41.9	30.1	46.5	98.0	84.9	235.2
3539	3539	TAMIL NADU	2013	3.9	30.9	30.0	20.3	42.0	54.6	42.7	110.7	113.5	127.9
3540	3540	TAMIL NADU	2014	7.4	6.1	8.1	8.3	139.1	47.8	50.6	117.7	98.9	252.2
3541	3541	TAMIL NADU	2015	8.3	2.3	21.7	108.8	112.4	62.4	43.5	81.6	98.4	132.6

115 rows × 20 columns

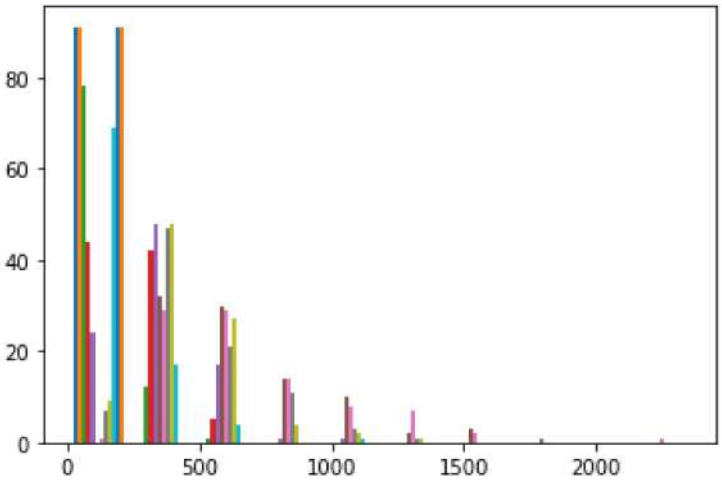
In [72]:
```
a1=a1.drop(['YEAR','SUBDIVISION','index','ANNUAL', 'Jan-Feb','Mar-May', 'Jun-S
a1
```

Out[72]:

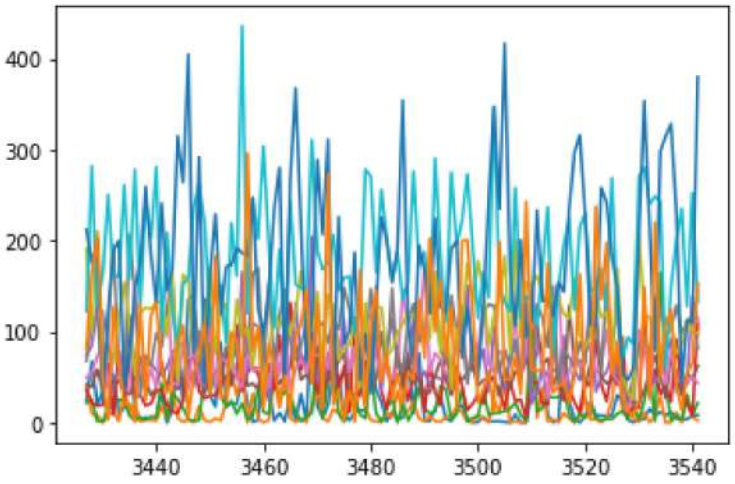
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
3427	24.5	39.1	21.7	36.0	74.0	41.8	49.3	67.9	191.1	122.3	212.3	80.4
3428	67.2	9.8	25.1	21.9	84.7	39.3	55.1	113.8	98.6	282.2	174.9	165.8
3429	19.3	7.8	1.7	18.2	128.5	58.5	72.6	115.0	210.4	128.1	200.5	203.2
3430	35.2	0.1	0.7	19.5	121.9	34.9	89.0	40.4	85.7	163.2	23.6	49.1
3431	6.5	7.5	17.2	64.8	83.7	49.8	39.0	101.8	73.5	250.4	123.7	3.2
...	...	...	...	...	...	...	...	...	...	...	...	...
3537	4.3	11.2	8.0	91.5	33.4	56.0	45.5	128.9	76.0	200.4	230.5	41.0
3538	3.0	0.1	2.5	35.5	41.9	30.1	46.5	98.0	84.9	235.2	44.5	14.0
3539	3.9	30.9	30.0	20.3	42.0	54.6	42.7	110.7	113.5	127.9	112.3	53.2
3540	7.4	6.1	8.1	8.3	139.1	47.8	50.6	117.7	98.9	252.2	110.8	66.0
3541	8.3	2.3	21.7	108.8	112.4	62.4	43.5	81.6	98.4	132.6	379.8	152.8

115 rows × 12 columns

In [234]:
```
plt.hist(a1)
plt.show()
```

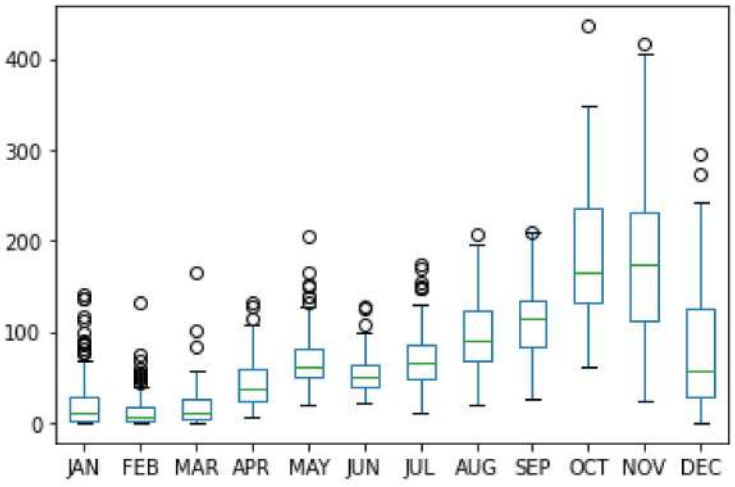


In [73]:
```
plt.plot(a1)
plt.show()
```



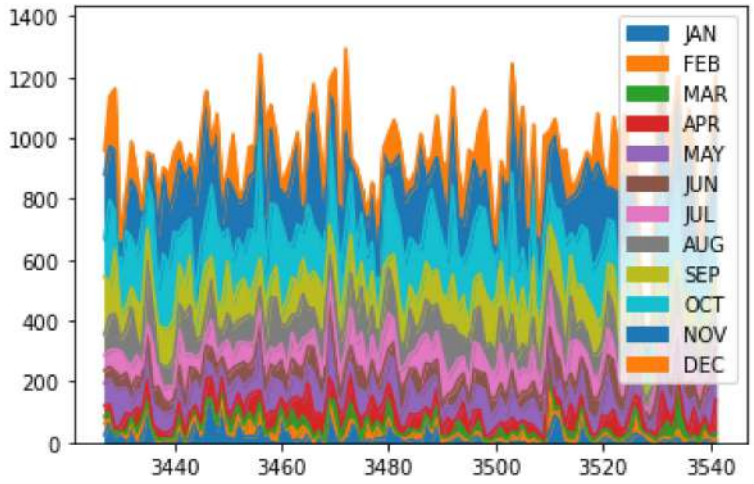
In [74]:
```
a1.plot.box()
```

Out[74]: <AxesSubplot:>



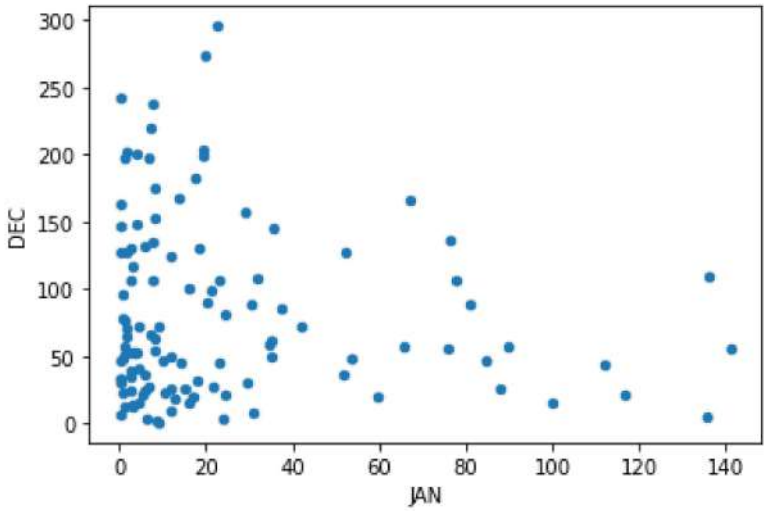
In [75]:
```
a1.plot.area()
```

Out[75]: <AxesSubplot:>



In [76]:
```
a1.plot.scatter('JAN','DEC')
```

Out[76]: <AxesSubplot:xlabel='JAN', ylabel='DEC'>



GUJARAT REGION

In [77]:
```
a1=df[df['SUBDIVISION']=='GUJARAT REGION']
a1
```

Out[77]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
2277	2277	GUJARAT REGION	1901	4.2	0.0	0.6	1.6	7.0	60.3	240.2	205.4	18.1	16.6
2278	2278	GUJARAT REGION	1902	3.9	0.0	0.0	0.6	1.0	32.8	229.8	299.0	281.2	2.3
2279	2279	GUJARAT REGION	1903	0.3	0.1	1.4	0.0	12.3	30.1	452.9	202.0	183.2	5.4
2280	2280	GUJARAT REGION	1904	0.8	10.6	16.8	0.2	3.9	48.3	194.8	71.8	138.0	6.1
2281	2281	GUJARAT REGION	1905	0.1	0.7	1.1	0.3	0.0	20.1	668.3	37.9	81.3	1.4
...	...	...	...	...	...	...	...	...	...	...	...	...	...
2387	2387	GUJARAT REGION	2011	0.0	0.2	0.0	0.0	0.0	16.3	259.2	451.7	162.5	0.4
2388	2388	GUJARAT REGION	2012	0.1	0.0	0.0	0.0	0.0	34.4	178.2	230.3	263.8	7.1
2389	2389	GUJARAT REGION	2013	0.0	0.9	0.1	4.6	0.0	155.7	405.4	211.1	287.3	53.2
2390	2390	GUJARAT REGION	2014	5.7	0.1	0.2	1.0	1.3	11.6	307.5	138.6	235.1	3.3
2391	2391	GUJARAT REGION	2015	1.8	0.0	6.1	5.5	0.9	120.7	354.7	37.4	93.4	2.2

115 rows × 20 columns

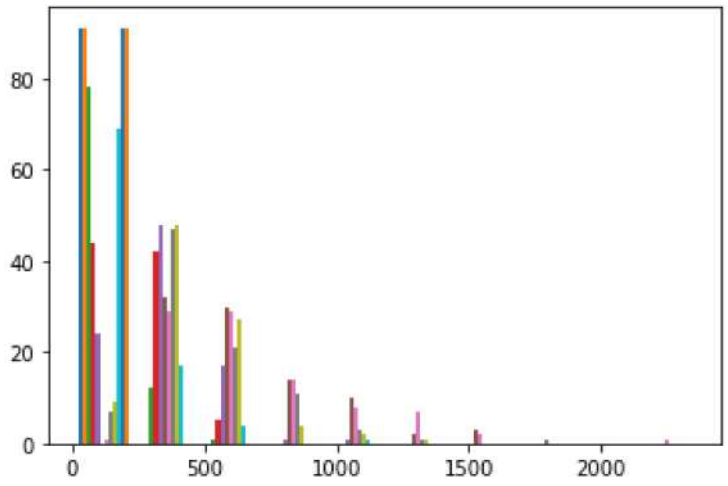
In [78]:
```
a1=a1.drop(['YEAR','SUBDIVISION','index','ANNUAL', 'Jan-Feb','Mar-May', 'Jun-S
a1
```

Out[78]:

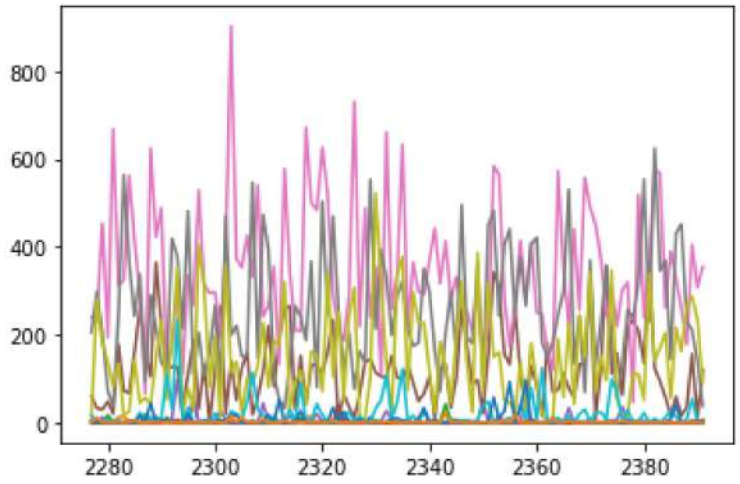
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2277	4.2	0.0	0.6	1.6	7.0	60.3	240.2	205.4	18.1	16.6	0.0	0.3
2278	3.9	0.0	0.0	0.6	1.0	32.8	229.8	299.0	281.2	2.3	1.5	11.9
2279	0.3	0.1	1.4	0.0	12.3	30.1	452.9	202.0	183.2	5.4	0.0	0.0
2280	0.8	10.6	16.8	0.2	3.9	48.3	194.8	71.8	138.0	6.1	0.1	1.2
2281	0.1	0.7	1.1	0.3	0.0	20.1	668.3	37.9	81.3	1.4	0.2	0.1
...	...	...	...	...	...	...	...	...	...	...	...	...
2387	0.0	0.2	0.0	0.0	0.0	16.3	259.2	451.7	162.5	0.4	0.0	0.0
2388	0.1	0.0	0.0	0.0	0.0	34.4	178.2	230.3	263.8	7.1	0.0	0.0
2389	0.0	0.9	0.1	4.6	0.0	155.7	405.4	211.1	287.3	53.2	0.1	0.0
2390	5.7	0.1	0.2	1.0	1.3	11.6	307.5	138.6	235.1	3.3	1.3	0.0
2391	1.8	0.0	6.1	5.5	0.9	120.7	354.7	37.4	93.4	2.2	0.3	0.0

115 rows × 12 columns

In [235]:
```
plt.hist(a1)
plt.show()
```

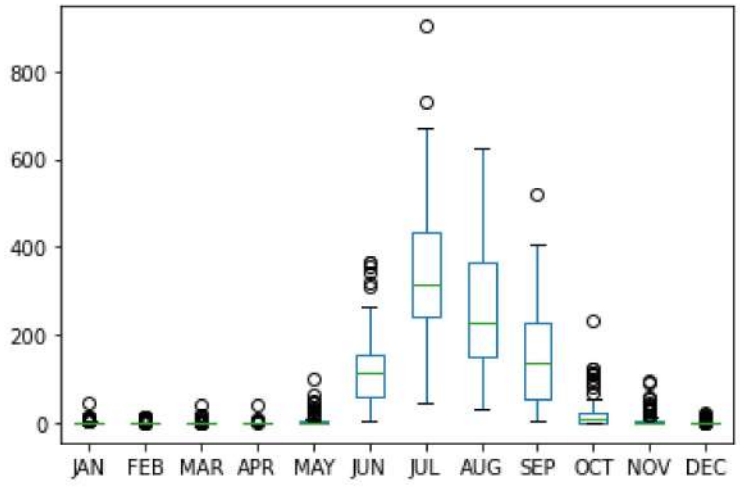


In [79]:
```
plt.plot(a1)
plt.show()
```



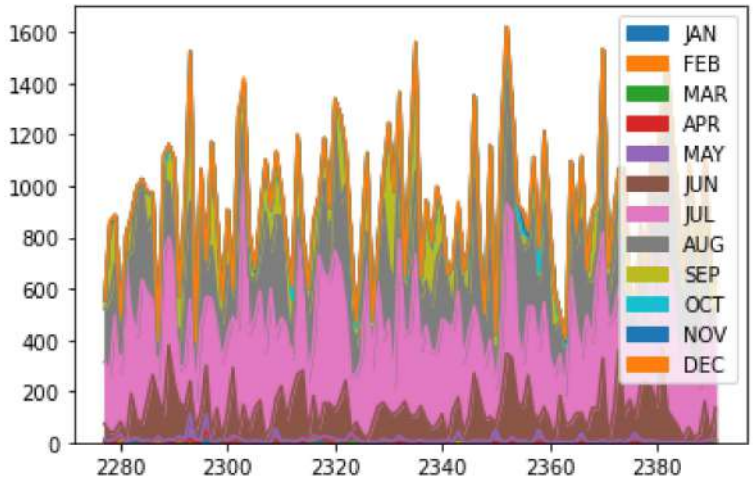
In [80]:
```
a1.plot.box()
```

Out[80]: <AxesSubplot:>



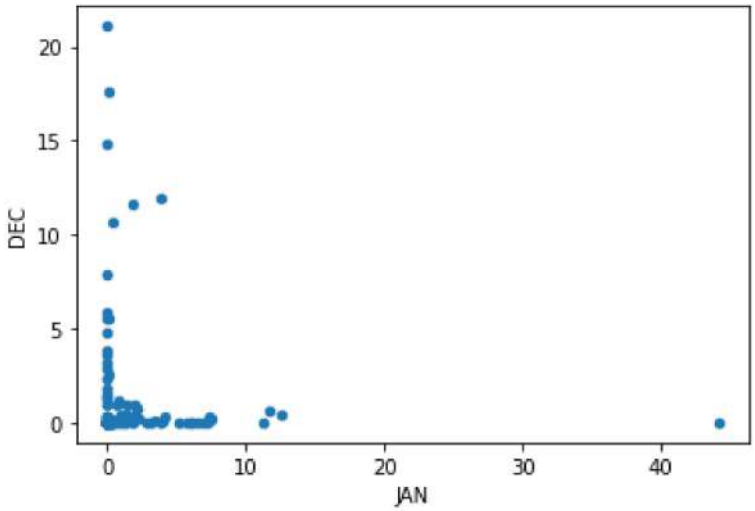
In [81]:
```
a1.plot.area()
```

Out[81]: <AxesSubplot:>



In [82]:
```
a1.plot.scatter('JAN','DEC')
```

Out[82]: <AxesSubplot:xlabel='JAN', ylabel='DEC'>



MADHYA MAHARASHTRA

In [83]:
```
a1=df[df['SUBDIVISION']=='MADHYA MAHARASHTRA']
a1
```

Out[83]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	O
2622	2622	MADHYA MAHARASHTRA	1901	18.8	0.6	7.7	36.6	30.4	107.7	215.9	194.1	83.7	6
2623	2623	MADHYA MAHARASHTRA	1902	7.8	0.0	0.1	5.0	9.8	102.6	210.9	114.5	169.5	6
2624	2624	MADHYA MAHARASHTRA	1903	7.6	0.0	0.0	3.2	77.2	86.3	281.8	155.5	142.3	7
2625	2625	MADHYA MAHARASHTRA	1904	0.4	4.7	1.7	3.0	18.7	114.6	126.5	59.5	183.0	9
2626	2626	MADHYA MAHARASHTRA	1905	0.0	1.2	0.0	2.3	23.6	65.0	252.8	79.0	52.6	5
...	...	...	...	...	...	...	...	...	...	...	...	...	...
2732	2732	MADHYA MAHARASHTRA	2011	0.0	0.3	0.3	5.0	2.9	133.3	261.4	238.1	148.4	6
2733	2733	MADHYA MAHARASHTRA	2012	0.0	0.0	0.0	3.0	1.4	67.9	203.0	187.8	129.5	9
2734	2734	MADHYA MAHARASHTRA	2013	0.1	5.3	0.8	5.7	6.0	212.4	311.8	147.0	210.3	5
2735	2735	MADHYA MAHARASHTRA	2014	3.1	6.2	24.4	7.5	29.8	44.0	277.9	240.3	120.4	3
2736	2736	MADHYA MAHARASHTRA	2015	1.4	0.8	41.2	9.6	24.4	177.0	111.7	67.2	146.6	4

115 rows × 20 columns

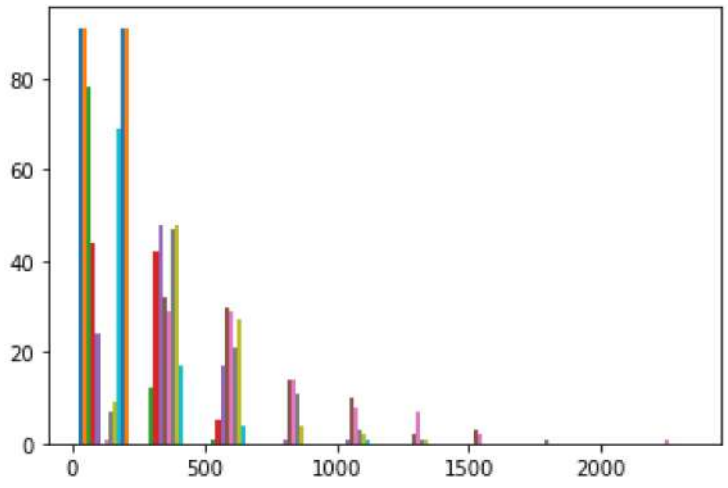
In [84]:
```
a1=a1.drop(['YEAR','SUBDIVISION','index','ANNUAL', 'Jan-Feb','Mar-May', 'Jun-S
a1
```

Out[84]:

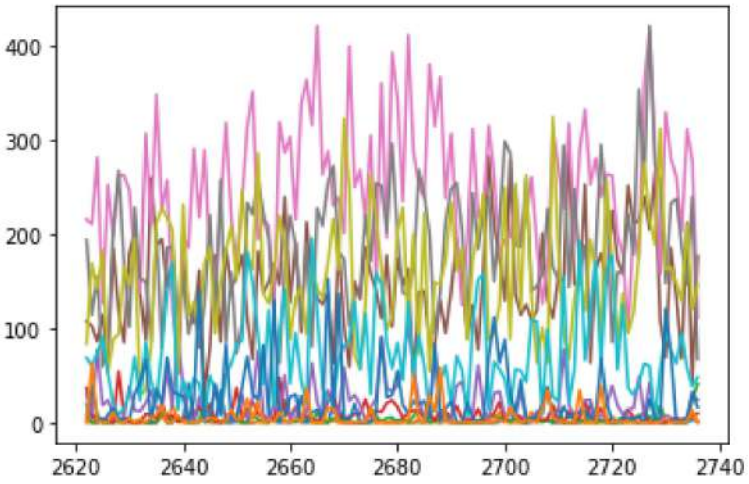
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2622	18.8	0.6	7.7	36.6	30.4	107.7	215.9	194.1	83.7	68.7	4.4	0.5
2623	7.8	0.0	0.1	5.0	9.8	102.6	210.9	114.5	169.5	60.4	40.5	62.9
2624	7.6	0.0	0.0	3.2	77.2	86.3	281.8	155.5	142.3	74.2	7.6	2.2
2625	0.4	4.7	1.7	3.0	18.7	114.6	126.5	59.5	183.0	91.1	0.0	0.4
2626	0.0	1.2	0.0	2.3	23.6	65.0	252.8	79.0	52.6	52.9	8.3	0.0
...	...	...	...	...	...	...	...	...	...	...	...	...
2732	0.0	0.3	0.3	5.0	2.9	133.3	261.4	238.1	148.4	62.8	0.0	0.0
2733	0.0	0.0	0.0	3.0	1.4	67.9	203.0	187.8	129.5	95.2	2.2	0.0
2734	0.1	5.3	0.8	5.7	6.0	212.4	311.8	147.0	210.3	57.8	4.0	1.3
2735	3.1	6.2	24.4	7.5	29.8	44.0	277.9	240.3	120.4	38.5	32.8	13.1
2736	1.4	0.8	41.2	9.6	24.4	177.0	111.7	67.2	146.6	48.3	16.2	0.1

115 rows × 12 columns

In [236]:
```
plt.hist(a1)
plt.show()
```

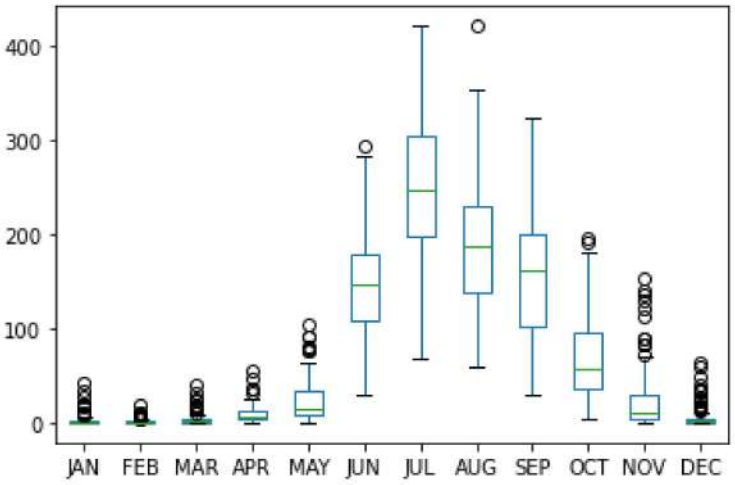


In [85]:
```
plt.plot(a1)
plt.show()
```



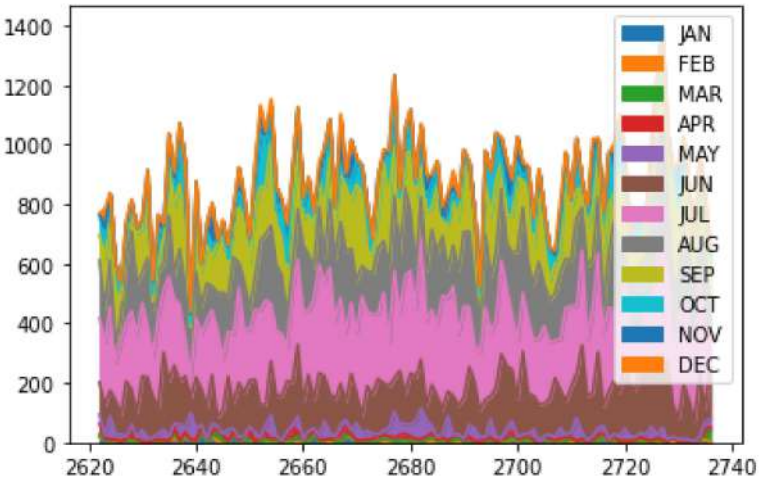
In [86]:
```
a1.plot.box()
```

Out[86]: <AxesSubplot:>



In [87]:
```
a1.plot.area()
```

Out[87]: <AxesSubplot:>



JHARKHAND

In [88]:
```
a1=df[df['SUBDIVISION']=='JHARKHAND']
a1
```

Out[88]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
782	782	JHARKHAND	1901	92.7	66.6	11.1	18.4	33.5	70.9	269.4	415.1	248.0	37.3
783	783	JHARKHAND	1902	4.2	7.7	13.2	28.5	59.8	89.9	456.1	204.9	306.6	17.6
784	784	JHARKHAND	1903	25.1	19.5	10.7	32.8	56.4	142.1	206.1	280.8	190.2	210.1
785	785	JHARKHAND	1904	2.5	17.0	38.1	9.1	116.1	308.9	494.1	336.1	125.6	30.6
786	786	JHARKHAND	1905	38.4	53.3	61.6	32.9	66.2	41.5	420.3	293.7	322.8	21.3
...	...	...	...	...	...	...	...	...	...	...	...	...	...
892	892	JHARKHAND	2011	3.3	2.5	6.4	25.4	55.0	349.0	181.8	403.2	324.6	23.3
893	893	JHARKHAND	2012	34.6	10.3	1.5	9.6	6.6	121.1	287.2	282.4	217.6	37.8
894	894	JHARKHAND	2013	1.1	17.9	1.6	22.3	85.0	181.5	211.1	278.1	173.8	281.1
895	895	JHARKHAND	2014	9.9	47.5	22.9	1.9	98.2	139.7	321.3	290.9	178.2	44.9
896	896	JHARKHAND	2015	12.2	2.6	21.6	55.5	25.5	183.3	429.7	240.7	85.1	22.7

115 rows × 20 columns

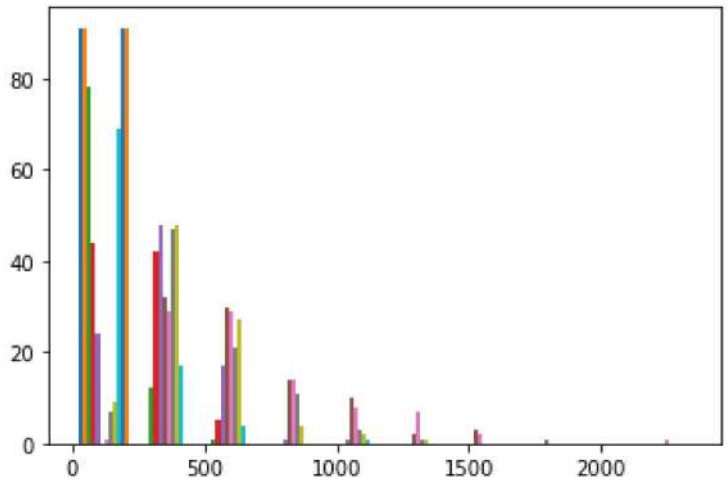
In [89]:
```
a1=a1.drop(['YEAR','SUBDIVISION','index','ANNUAL', 'Jan-Feb','Mar-May', 'Jun-S
a1
```

Out[89]:

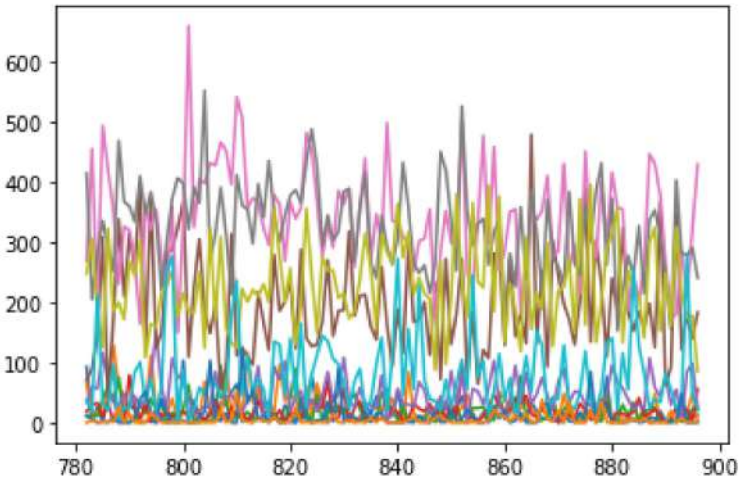
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
782	92.7	66.6	11.1	18.4	33.5	70.9	269.4	415.1	248.0	37.3	11.5	0.0
783	4.2	7.7	13.2	28.5	59.8	89.9	456.1	204.9	306.6	17.6	5.9	3.2
784	25.1	19.5	10.7	32.8	56.4	142.1	206.1	280.8	190.2	210.1	0.5	0.0
785	2.5	17.0	38.1	9.1	116.1	308.9	494.1	336.1	125.6	30.6	2.3	0.4
786	38.4	53.3	61.6	32.9	66.2	41.5	420.3	293.7	322.8	21.3	0.0	2.7
...	...	...	...	...	...	...	...	...	...	...	...	...
892	3.3	2.5	6.4	25.4	55.0	349.0	181.8	403.2	324.6	23.3	0.0	0.1
893	34.6	10.3	1.5	9.6	6.6	121.1	287.2	282.4	217.6	37.8	48.6	7.6
894	1.1	17.9	1.6	22.3	85.0	181.5	211.1	278.1	173.8	281.1	0.0	0.0
895	9.9	47.5	22.9	1.9	98.2	139.7	321.3	290.9	178.2	44.9	0.0	1.2
896	12.2	2.6	21.6	55.5	25.5	183.3	429.7	240.7	85.1	22.7	0.2	2.7

115 rows × 12 columns

In [237]:
```
plt.hist(a1)
plt.show()
```

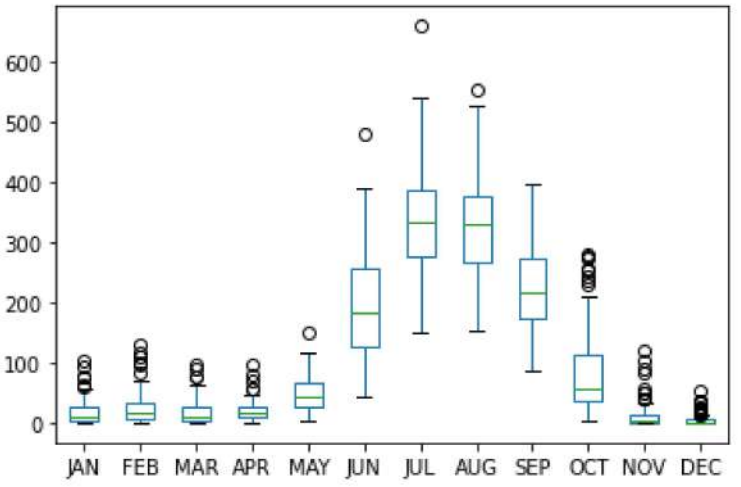


In [90]:
```
plt.plot(a1)
plt.show()
```



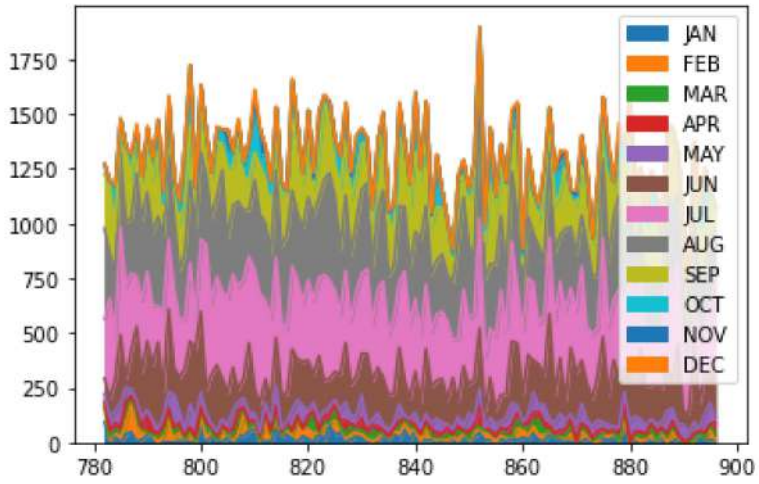
In [91]:
```
a1.plot.box()
```

Out[91]: <AxesSubplot:>



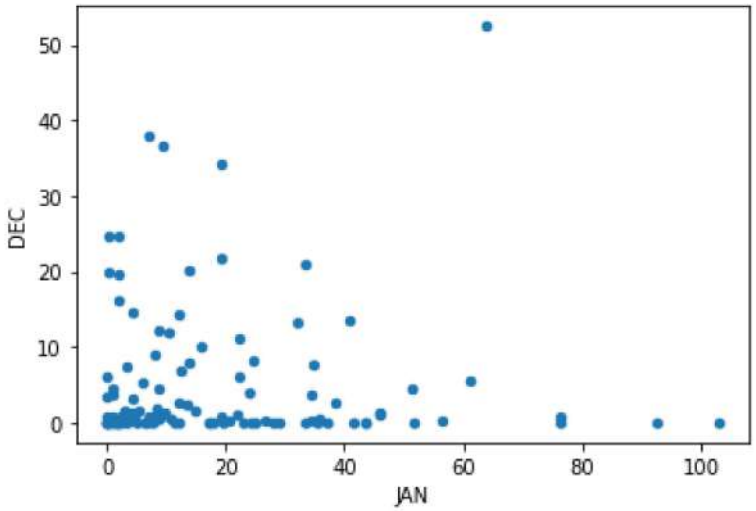
In [92]:
```
a1.plot.area()
```

Out[92]: <AxesSubplot:>



In [93]:
```
a1.plot.scatter('JAN','DEC')
```

Out[93]: <AxesSubplot:xlabel='JAN', ylabel='DEC'>



KONKAN & GOA

In [94]:
```
a1=df[df['SUBDIVISION']=='KONKAN & GOA']
a1
```

Out[94]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
2507	2507	KONKAN & GOA	1901	5.6	0.1	0.4	35.7	19.9	746.1	1075.5	748.0	117.4	
2508	2508	KONKAN & GOA	1902	0.3	0.0	0.0	0.4	7.6	428.2	943.6	515.1	613.8	
2509	2509	KONKAN & GOA	1903	0.0	0.0	0.1	0.0	201.1	470.5	1298.6	673.9	285.1	1
2510	2510	KONKAN & GOA	1904	0.0	0.1	6.6	6.3	4.6	975.8	771.7	321.3	217.0	
2511	2511	KONKAN & GOA	1905	0.1	0.1	0.0	0.4	8.6	293.7	770.6	305.5	208.3	
...	...	...	...	...	...	...	...	...	...	...	...	...	...
2617	2617	KONKAN & GOA	2011	0.0	0.0	0.0	3.4	1.1	857.0	1384.1	987.9	468.3	1
2618	2618	KONKAN & GOA	2012	0.0	0.0	0.0	0.6	1.1	633.0	928.5	762.5	515.3	1
2619	2619	KONKAN & GOA	2013	1.8	5.4	0.1	0.1	18.5	1028.3	1478.5	497.6	340.7	1
2620	2620	KONKAN & GOA	2014	1.3	5.3	1.8	0.7	21.3	238.2	1293.2	658.0	419.5	
2621	2621	KONKAN & GOA	2015	2.7	0.0	36.8	3.6	11.3	764.0	526.5	377.3	240.9	

115 rows × 20 columns

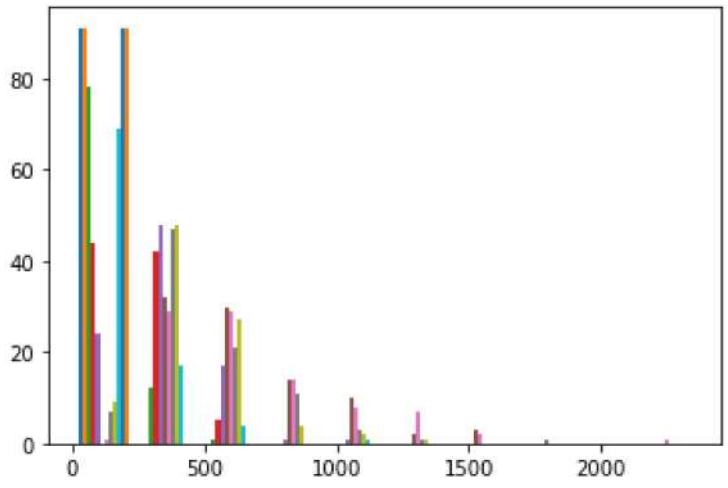
In [95]:
```
a1=a1.drop(['YEAR','SUBDIVISION','index','ANNUAL', 'Jan-Feb','Mar-May', 'Jun-S
a1
```

Out[95]:

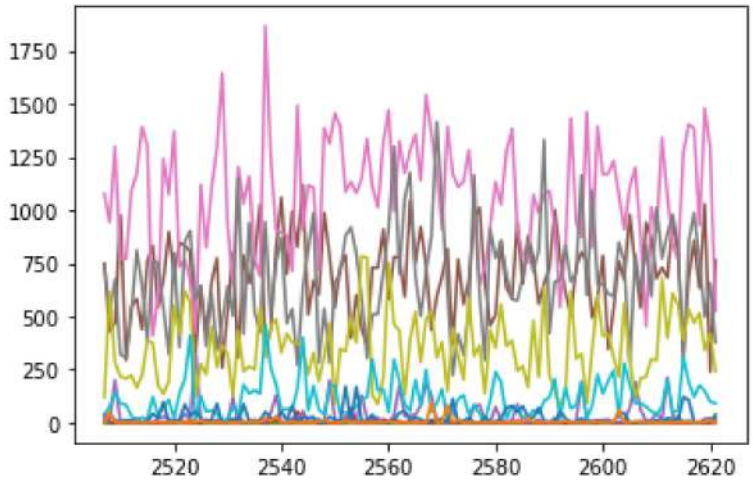
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2507	5.6	0.1	0.4	35.7	19.9	746.1	1075.5	748.0	117.4	38.6	5.4	0.1
2508	0.3	0.0	0.0	0.4	7.6	428.2	943.6	515.1	613.8	74.3	42.7	48.0
2509	0.0	0.0	0.1	0.0	201.1	470.5	1298.6	673.9	285.1	140.8	12.4	1.7
2510	0.0	0.1	6.6	6.3	4.6	975.8	771.7	321.3	217.0	90.3	0.0	0.0
2511	0.1	0.1	0.0	0.4	8.6	293.7	770.6	305.5	208.3	83.5	12.1	0.0
...	...	...	...	...	...	...	...	...	...	...	...	...
2617	0.0	0.0	0.0	3.4	1.1	857.0	1384.1	987.9	468.3	120.3	3.1	0.0
2618	0.0	0.0	0.0	0.6	1.1	633.0	928.5	762.5	515.3	175.1	2.3	0.0
2619	1.8	5.4	0.1	0.1	18.5	1028.3	1478.5	497.6	340.7	149.3	2.1	1.5
2620	1.3	5.3	1.8	0.7	21.3	238.2	1293.2	658.0	419.5	98.7	8.0	11.7
2621	2.7	0.0	36.8	3.6	11.3	764.0	526.5	377.3	240.9	91.4	27.3	0.0

115 rows × 12 columns

In [238]:
```
plt.hist(a1)
plt.show()
```

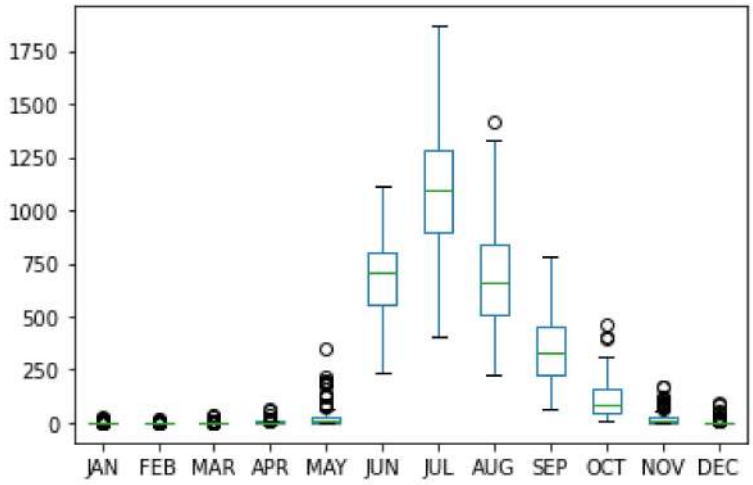


In [96]:
```
plt.plot(a1)
plt.show()
```



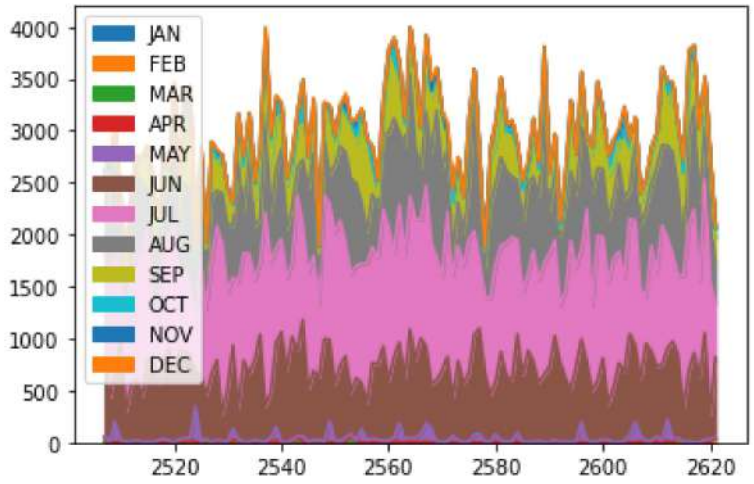
In [97]:
```
a1.plot.box()
```

Out[97]: <AxesSubplot:>



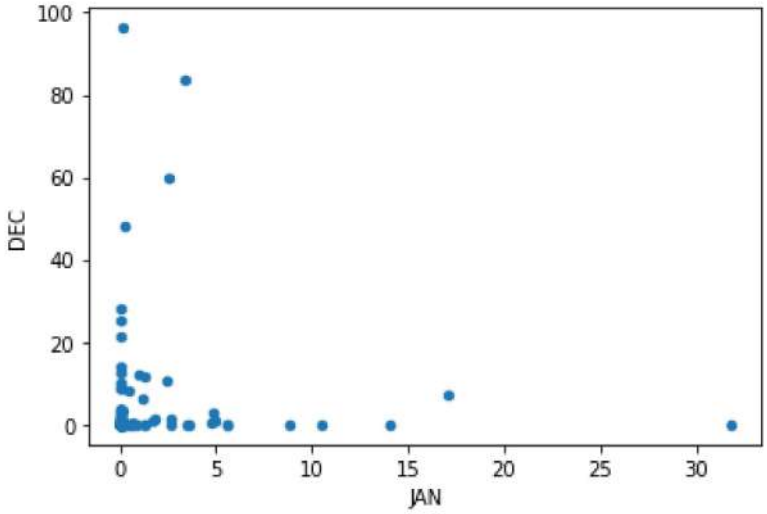
In [98]:
```
a1.plot.area()
```

Out[98]: <AxesSubplot:>



In [99]:
```
a1.plot.scatter('JAN','DEC')
```

Out[99]: <AxesSubplot:xlabel='JAN', ylabel='DEC'>



EAST RAJASTHAN

In [100]:
```
a1=df[df['SUBDIVISION']=='EAST RAJASTHAN']
a1
```

Out[100]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
1932	1932	EAST RAJASTHAN	1901	21.6	8.9	2.9	0.7	5.0	15.0	164.8	175.6	7.5	9.8
1933	1933	EAST RAJASTHAN	1902	4.1	0.7	0.0	1.8	9.9	34.6	247.6	116.7	145.6	14.4
1934	1934	EAST RAJASTHAN	1903	1.9	0.7	1.3	0.1	12.9	15.6	238.2	229.1	168.5	17.8
1935	1935	EAST RAJASTHAN	1904	4.3	5.5	21.7	0.2	27.5	49.9	289.7	223.5	50.2	1.5
1936	1936	EAST RAJASTHAN	1905	4.1	8.8	3.2	1.6	2.0	14.4	130.5	30.9	83.8	0.0
...	...	...	...	...	...	...	...	...	...	...	...	...	...
2042	2042	EAST RAJASTHAN	2011	0.0	11.2	0.2	0.5	5.1	140.9	193.6	284.1	166.4	0.0
2043	2043	EAST RAJASTHAN	2012	1.9	0.0	0.0	3.6	9.5	11.2	170.5	365.0	131.3	0.5
2044	2044	EAST RAJASTHAN	2013	1.4	21.7	0.4	3.2	1.0	90.6	319.0	278.5	88.0	30.6
2045	2045	EAST RAJASTHAN	2014	28.4	10.0	6.4	7.3	8.4	23.5	197.1	261.0	136.9	3.2
2046	2046	EAST RAJASTHAN	2015	12.1	0.1	55.9	15.9	3.5	96.4	297.6	142.8	20.1	5.0

115 rows × 20 columns

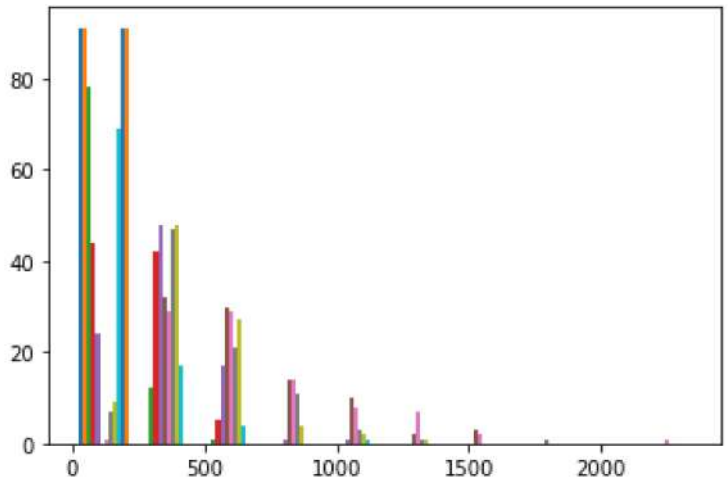
In [101]:
```
a1=a1.drop(['YEAR','SUBDIVISION','index','ANNUAL', 'Jan-Feb','Mar-May', 'Jun-S
a1
```

Out[101]:

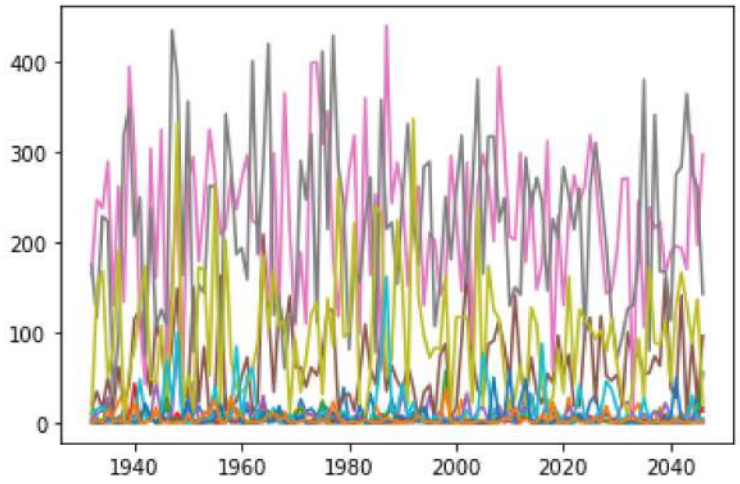
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1932	21.6	8.9	2.9	0.7	5.0	15.0	164.8	175.6	7.5	9.8	0.0	0.8
1933	4.1	0.7	0.0	1.8	9.9	34.6	247.6	116.7	145.6	14.4	0.0	2.8
1934	1.9	0.7	1.3	0.1	12.9	15.6	238.2	229.1	168.5	17.8	0.0	0.0
1935	4.3	5.5	21.7	0.2	27.5	49.9	289.7	223.5	50.2	1.5	5.8	14.7
1936	4.1	8.8	3.2	1.6	2.0	14.4	130.5	30.9	83.8	0.0	0.0	0.6
...	...	...	...	...	...	...	...	...	...	...	...	...
2042	0.0	11.2	0.2	0.5	5.1	140.9	193.6	284.1	166.4	0.0	0.0	0.0
2043	1.9	0.0	0.0	3.6	9.5	11.2	170.5	365.0	131.3	0.5	0.0	0.1
2044	1.4	21.7	0.4	3.2	1.0	90.6	319.0	278.5	88.0	30.6	1.3	0.3
2045	28.4	10.0	6.4	7.3	8.4	23.5	197.1	261.0	136.9	3.2	0.0	1.1
2046	12.1	0.1	55.9	15.9	3.5	96.4	297.6	142.8	20.1	5.0	0.5	0.8

115 rows × 12 columns

In [239]:
```
plt.hist(a1)
plt.show()
```

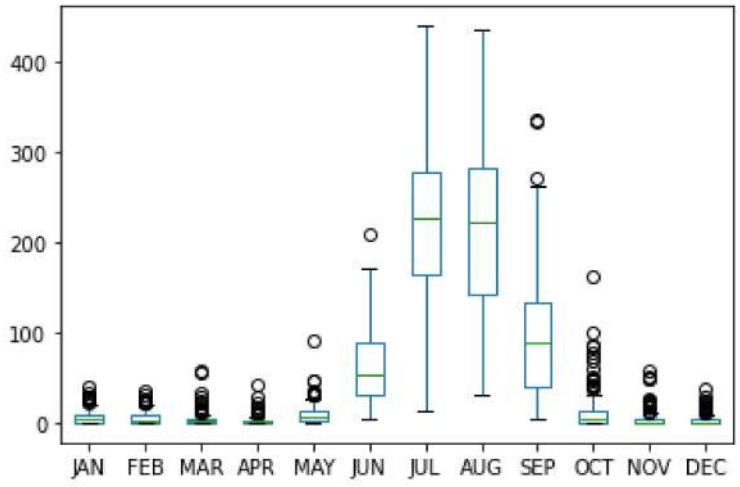


In [102]:
```
plt.plot(a1)
plt.show()
```



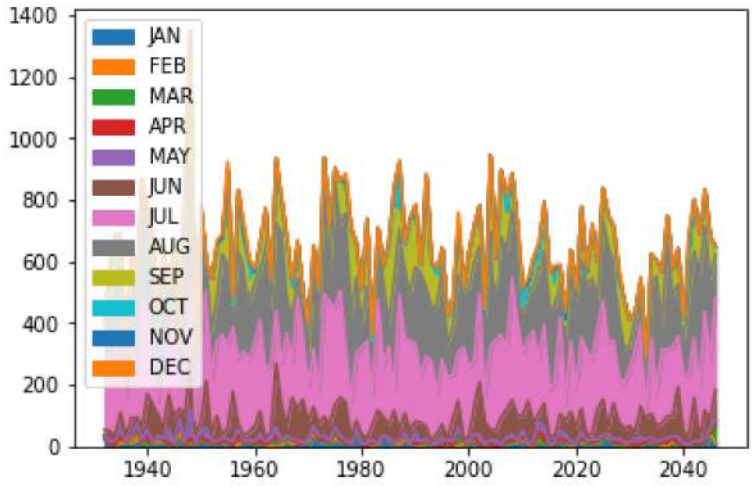
In [103]:
```
a1.plot.box()
```

Out[103]: <AxesSubplot:>



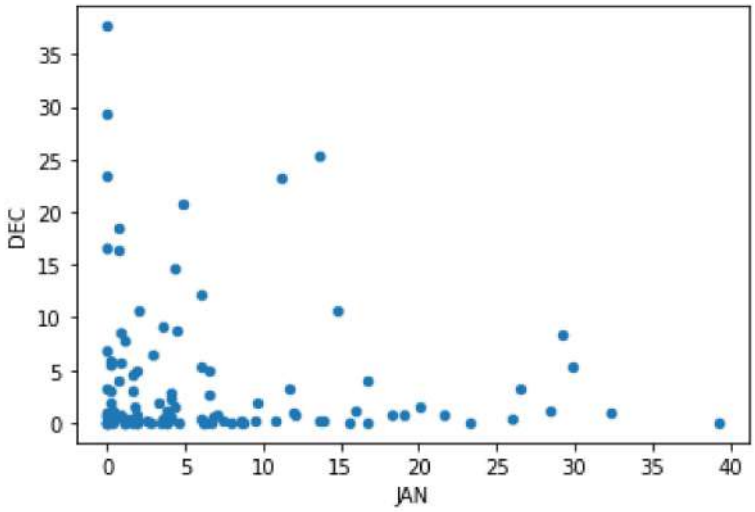
In [104]:
```
a1.plot.area()
```

Out[104]: <AxesSubplot:>



In [105]:
```
a1.plot.scatter('JAN','DEC')
```

Out[105]: <AxesSubplot:xlabel='JAN', ylabel='DEC'>



SUB HIMALAYAN WEST BENGAL & SIKKIM

In [106]:
```
a1=df[df['SUBDIVISION']=='SUB HIMALAYAN WEST BENGAL & SIKKIM']
a1
```

Out[106]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	O
437	437	SUB HIMALAYAN WEST BENGAL & SIKKIM	1901	26.5	14.8	14.1	29.2	195.5	488.4	524.8	501.1	242.7	5
438	438	SUB HIMALAYAN WEST BENGAL & SIKKIM	1902	1.2	0.7	87.1	126.1	271.3	539.2	671.0	603.8	799.9	7
439	439	SUB HIMALAYAN WEST BENGAL & SIKKIM	1903	5.5	8.7	19.6	18.6	163.6	541.2	431.5	708.8	365.2	14
440	440	SUB HIMALAYAN WEST BENGAL & SIKKIM	1904	3.4	29.2	0.9	124.3	333.6	274.2	500.4	468.5	260.6	16
441	441	SUB HIMALAYAN WEST BENGAL & SIKKIM	1905	12.0	31.2	51.9	104.4	290.6	524.8	523.1	1036.6	321.1	8
...	...	...	...	...	...	...	...	...	...	...	...	...	...
547	547	SUB HIMALAYAN WEST BENGAL & SIKKIM	2011	8.5	19.9	71.2	135.0	247.8	419.8	612.3	470.3	356.3	4
548	548	SUB HIMALAYAN WEST BENGAL & SIKKIM	2012	15.3	13.9	45.5	159.8	202.4	604.2	684.5	332.7	434.7	11
549	549	SUB HIMALAYAN WEST BENGAL & SIKKIM	2013	3.0	23.6	32.1	114.7	296.5	404.9	588.4	416.3	308.0	19
550	550	SUB HIMALAYAN WEST BENGAL & SIKKIM	2014	0.2	26.6	37.7	47.9	308.6	543.2	384.6	563.3	371.5	3
551	551	SUB HIMALAYAN WEST BENGAL & SIKKIM	2015	15.7	15.0	64.8	149.0	304.6	508.2	393.3	626.6	354.9	5

115 rows × 20 columns

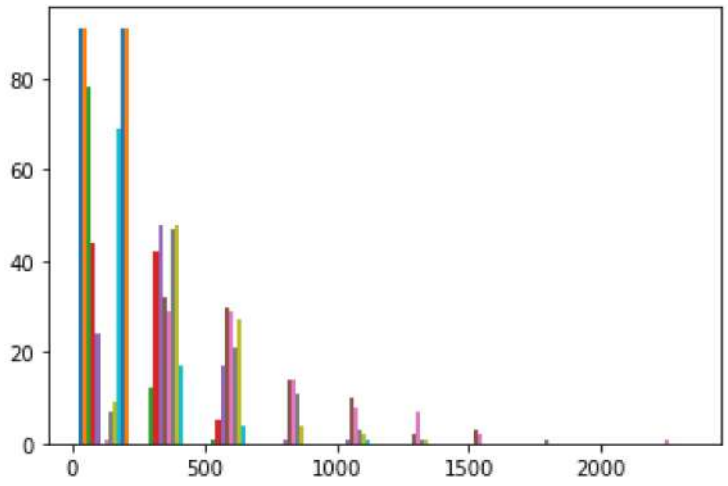
In [107]:
```
a1=a1.drop(['YEAR','SUBDIVISION','index','ANNUAL', 'Jan-Feb','Mar-May', 'Jun-S
a1
```

Out[107]:

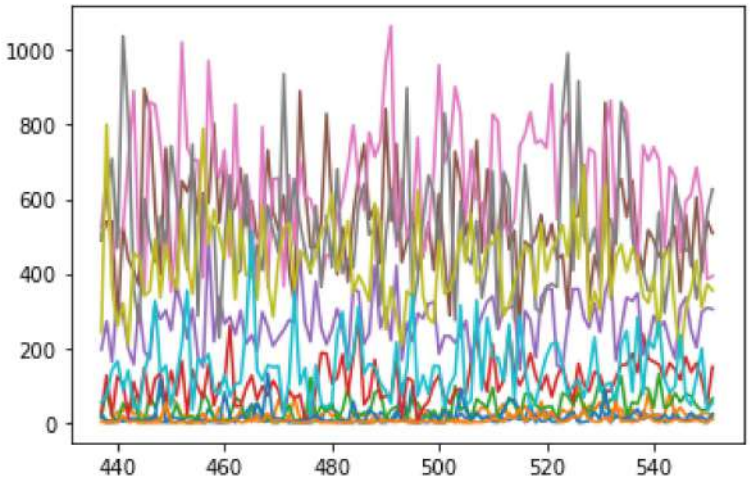
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
437	26.5	14.8	14.1	29.2	195.5	488.4	524.8	501.1	242.7	55.5	17.9	2.6
438	1.2	0.7	87.1	126.1	271.3	539.2	671.0	603.8	799.9	74.4	5.6	0.0
439	5.5	8.7	19.6	18.6	163.6	541.2	431.5	708.8	365.2	141.3	0.3	0.0
440	3.4	29.2	0.9	124.3	333.6	274.2	500.4	468.5	260.6	164.8	8.9	1.1
441	12.0	31.2	51.9	104.4	290.6	524.8	523.1	1036.6	321.1	87.9	2.7	18.7
...	...	...	...	...	...	...	...	...	...	...	...	...
547	8.5	19.9	71.2	135.0	247.8	419.8	612.3	470.3	356.3	46.7	26.7	4.3
548	15.3	13.9	45.5	159.8	202.4	604.2	684.5	332.7	434.7	119.4	12.5	7.4
549	3.0	23.6	32.1	114.7	296.5	404.9	588.4	416.3	308.0	199.8	16.1	2.7
550	0.2	26.6	37.7	47.9	308.6	543.2	384.6	563.3	371.5	31.2	5.3	2.4
551	15.7	15.0	64.8	149.0	304.6	508.2	393.3	626.6	354.9	53.6	23.8	9.0

115 rows × 12 columns

In [240]:
```
plt.hist(a1)
plt.show()
```

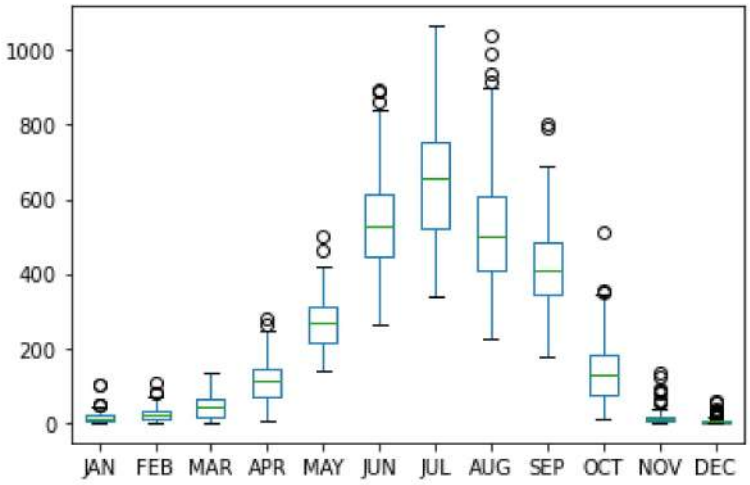


In [108]:
```
plt.plot(a1)
plt.show()
```



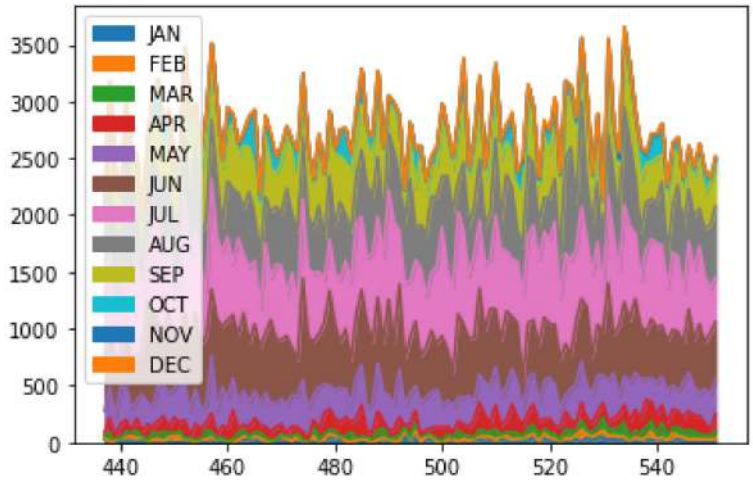
In [109]:
```
a1.plot.box()
```

Out[109]: <AxesSubplot:>



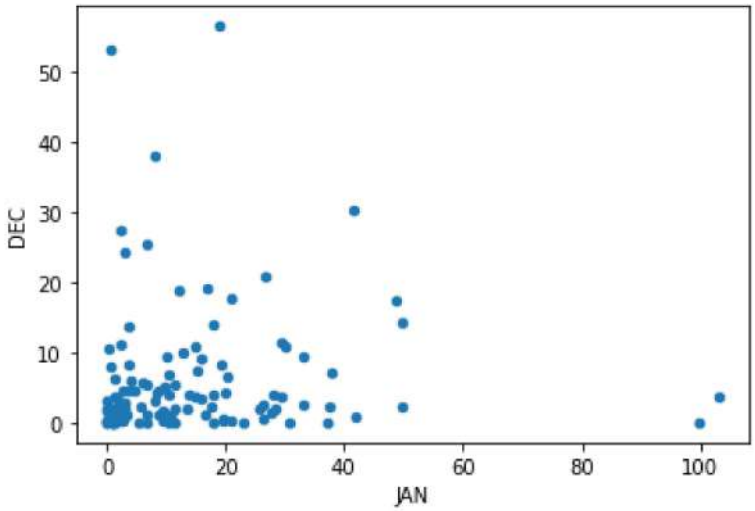
In [110]:
```
a1.plot.area()
```

Out[110]: <AxesSubplot:>



In [111]:
```
a1.plot.scatter('JAN','DEC')
```

Out[111]: <AxesSubplot:xlabel='JAN', ylabel='DEC'>



EAST UTTAR PRADESH

In [112]:
```
a1=df[df['SUBDIVISION']=='EAST UTTAR PRADESH']
a1
```

Out[112]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OC
1012	1012	EAST UTTAR PRADESH	1901	62.6	31.3	8.2	1.1	13.6	21.8	226.5	285.6	215.4	4.
1013	1013	EAST UTTAR PRADESH	1902	6.1	2.3	2.4	2.0	21.4	32.5	411.5	155.4	257.2	13.
1014	1014	EAST UTTAR PRADESH	1903	8.2	0.4	1.3	0.7	15.3	71.6	115.3	420.2	258.7	324.
1015	1015	EAST UTTAR PRADESH	1904	7.3	1.5	8.3	0.4	28.7	148.0	359.4	328.8	95.0	50.
1016	1016	EAST UTTAR PRADESH	1905	16.8	23.6	20.0	5.4	15.4	17.3	302.4	316.2	169.5	3.
...	...	...	...	...	...	...	...	...	...	...	...	...	...
1122	1122	EAST UTTAR PRADESH	2011	1.0	2.7	1.6	2.9	32.2	163.8	197.9	232.1	146.4	0.
1123	1123	EAST UTTAR PRADESH	2012	20.3	1.2	3.4	2.8	0.2	18.5	234.2	156.0	164.4	0.
1124	1124	EAST UTTAR PRADESH	2013	6.1	59.6	2.7	8.7	1.1	309.7	230.0	246.1	78.2	97.
1125	1125	EAST UTTAR PRADESH	2014	47.4	25.8	15.4	1.7	10.7	47.8	224.5	138.1	106.7	74.
1126	1126	EAST UTTAR PRADESH	2015	30.0	4.1	48.2	23.2	8.6	95.3	179.0	175.8	21.9	11.

115 rows × 20 columns

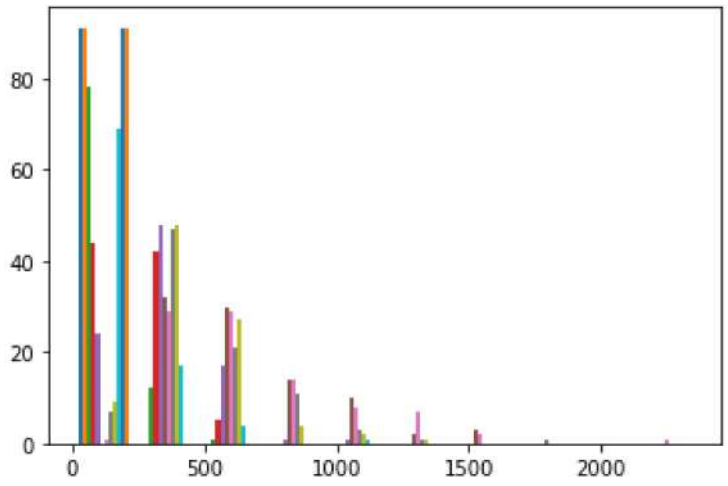
In [113]:
```
a1=a1.drop(['YEAR','SUBDIVISION','index','ANNUAL', 'Jan-Feb','Mar-May', 'Jun-S
a1
```

Out[113]:

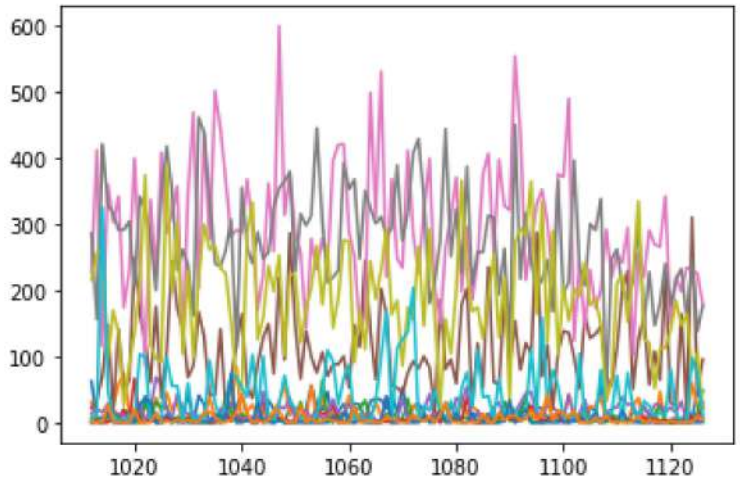
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1012	62.6	31.3	8.2	1.1	13.6	21.8	226.5	285.6	215.4	4.9	0.1	2.1
1013	6.1	2.3	2.4	2.0	21.4	32.5	411.5	155.4	257.2	13.2	1.2	0.0
1014	8.2	0.4	1.3	0.7	15.3	71.6	115.3	420.2	258.7	324.7	0.0	0.0
1015	7.3	1.5	8.3	0.4	28.7	148.0	359.4	328.8	95.0	50.6	17.0	26.3
1016	16.8	23.6	20.0	5.4	15.4	17.3	302.4	316.2	169.5	3.3	0.0	1.6
...	...	...	...	...	...	...	...	...	...	...	...	...
1122	1.0	2.7	1.6	2.9	32.2	163.8	197.9	232.1	146.4	0.6	0.0	0.0
1123	20.3	1.2	3.4	2.8	0.2	18.5	234.2	156.0	164.4	0.7	0.3	0.7
1124	6.1	59.6	2.7	8.7	1.1	309.7	230.0	246.1	78.2	97.4	0.5	1.1
1125	47.4	25.8	15.4	1.7	10.7	47.8	224.5	138.1	106.7	74.7	0.0	8.4
1126	30.0	4.1	48.2	23.2	8.6	95.3	179.0	175.8	21.9	11.8	0.5	4.9

115 rows × 12 columns

In [241]:
```
plt.hist(a1)
plt.show()
```

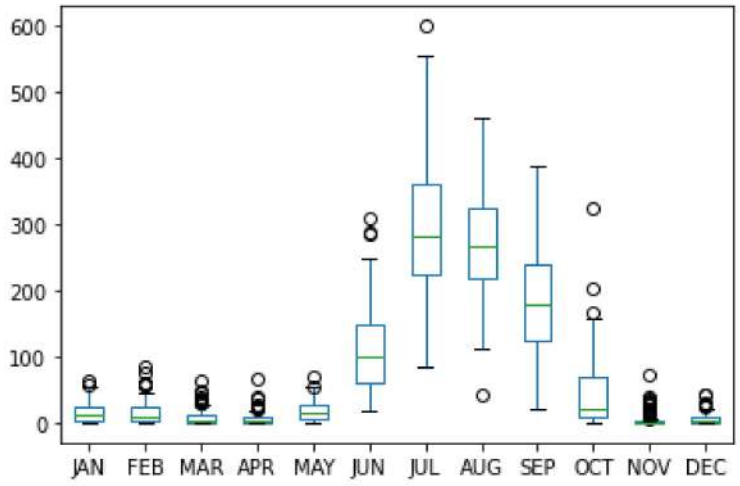


In [114]:
```
plt.plot(a1)
plt.show()
```



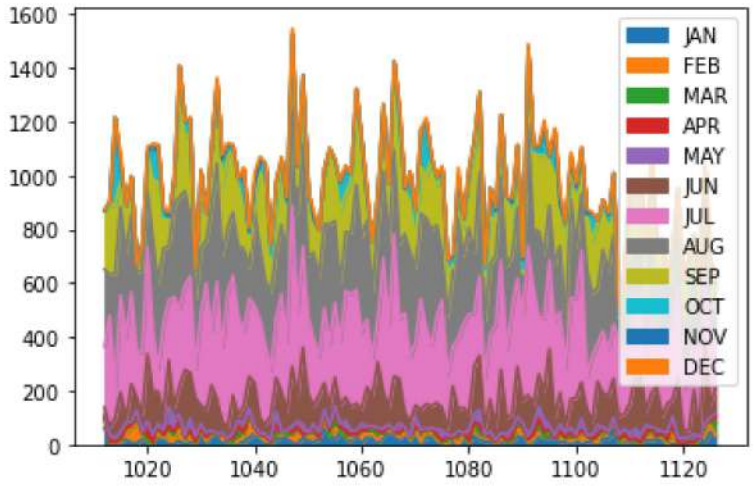
In [115]:
```
a1.plot.box()
```

Out[115]: <AxesSubplot:>



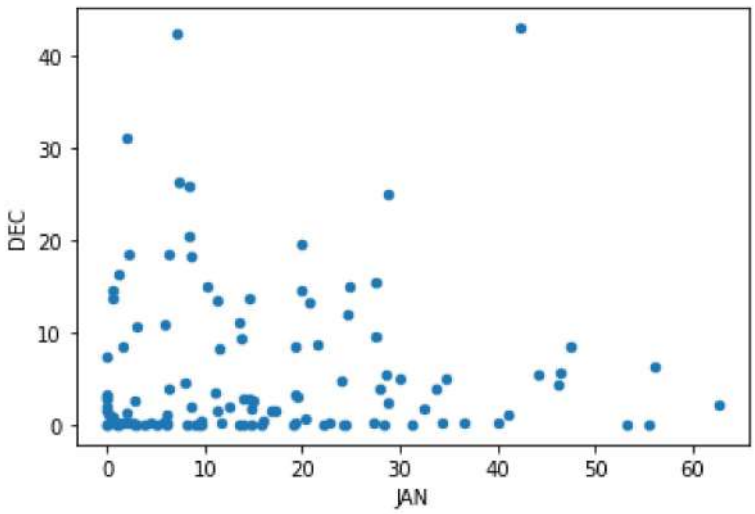
In [116]:
```
a1.plot.area()
```

Out[116]: <AxesSubplot:>



In [117]:
```
a1.plot.scatter('JAN','DEC')
```

Out[117]: <AxesSubplot:xlabel='JAN', ylabel='DEC'>



MATATHWADA

In [118]:
```
a1=df[df['SUBDIVISION']=='MATATHWADA']
a1
```

Out[118]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OC
2737	2737	MATATHWADA	1901	15.8	3.3	32.1	48.5	26.5	193.1	184.1	249.8	74.0	81
2738	2738	MATATHWADA	1902	1.3	0.0	0.4	7.2	0.8	52.4	120.9	85.2	273.3	61
2739	2739	MATATHWADA	1903	2.6	0.8	0.0	1.7	58.3	104.4	264.2	281.9	173.3	139
2740	2740	MATATHWADA	1904	0.0	0.9	12.1	0.3	7.2	79.2	118.4	57.3	339.0	76
2741	2741	MATATHWADA	1905	1.3	2.0	0.0	6.6	4.8	84.6	94.8	137.6	157.8	15
...	...	...	...	...	...	...	...	...	...	...	...	...	...
2847	2847	MATATHWADA	2011	0.0	3.8	0.7	3.5	3.1	79.2	230.1	228.5	90.0	24
2848	2848	MATATHWADA	2012	0.0	0.0	0.0	0.6	2.3	72.2	161.1	101.4	120.0	68
2849	2849	MATATHWADA	2013	1.5	9.4	2.6	7.9	6.4	160.9	293.4	136.9	154.1	94
2850	2850	MATATHWADA	2014	1.4	13.4	79.0	11.9	7.0	30.4	105.0	178.9	84.5	14
2851	2851	MATATHWADA	2015	10.1	1.6	32.0	39.6	12.3	118.3	27.4	112.2	154.3	19

115 rows × 20 columns

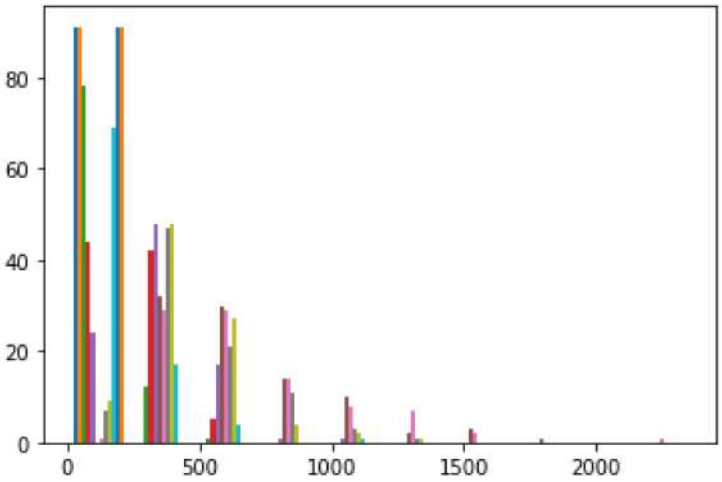
In [119]:
```
a1=a1.drop(['YEAR','SUBDIVISION','index','ANNUAL', 'Jan-Feb','Mar-May', 'Jun-S
a1
```

Out[119]:

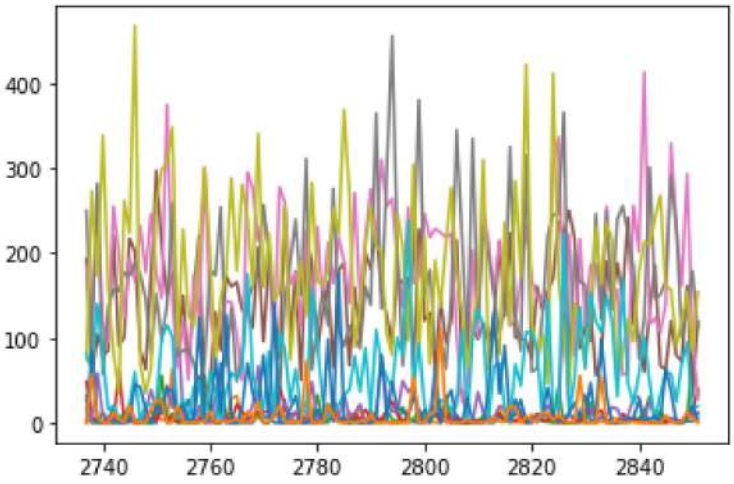
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2737	15.8	3.3	32.1	48.5	26.5	193.1	184.1	249.8	74.0	81.6	0.0	0.0
2738	1.3	0.0	0.4	7.2	0.8	52.4	120.9	85.2	273.3	61.3	84.4	56.9
2739	2.6	0.8	0.0	1.7	58.3	104.4	264.2	281.9	173.3	139.9	0.3	5.3
2740	0.0	0.9	12.1	0.3	7.2	79.2	118.4	57.3	339.0	76.2	0.0	0.0
2741	1.3	2.0	0.0	6.6	4.8	84.6	94.8	137.6	157.8	15.4	0.9	0.0
...	...	...	...	...	...	...	...	...	...	...	...	...
2847	0.0	3.8	0.7	3.5	3.1	79.2	230.1	228.5	90.0	24.8	0.0	0.0
2848	0.0	0.0	0.0	0.6	2.3	72.2	161.1	101.4	120.0	68.8	0.3	0.0
2849	1.5	9.4	2.6	7.9	6.4	160.9	293.4	136.9	154.1	94.3	7.4	13.1
2850	1.4	13.4	79.0	11.9	7.0	30.4	105.0	178.9	84.5	14.2	19.9	3.3
2851	10.1	1.6	32.0	39.6	12.3	118.3	27.4	112.2	154.3	19.5	4.8	0.0

115 rows × 12 columns

In [242]:
```
plt.hist(a1)
plt.show()
```

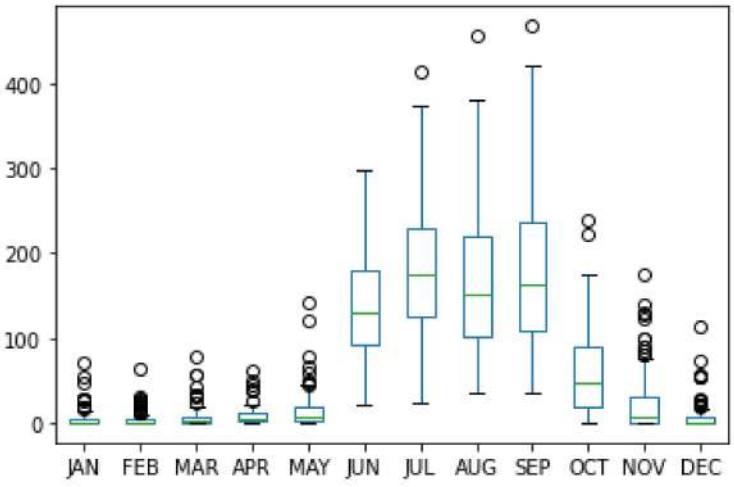


In [120]:
```
plt.plot(a1)
plt.show()
```



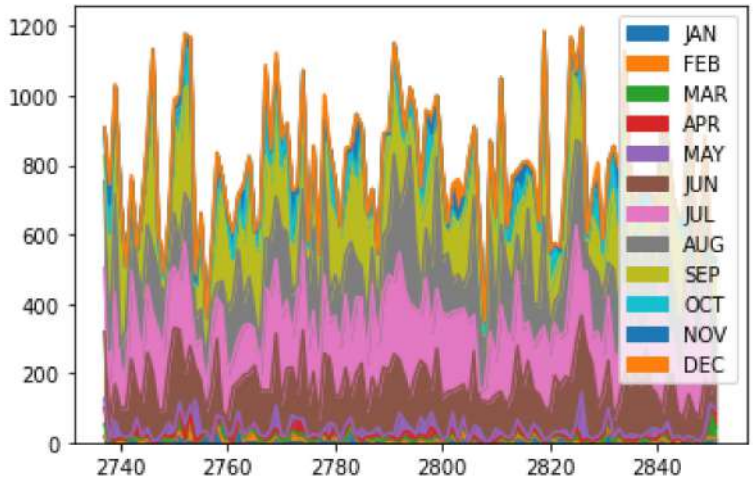
In [121]:
```
a1.plot.box()
```

Out[121]: <AxesSubplot:>



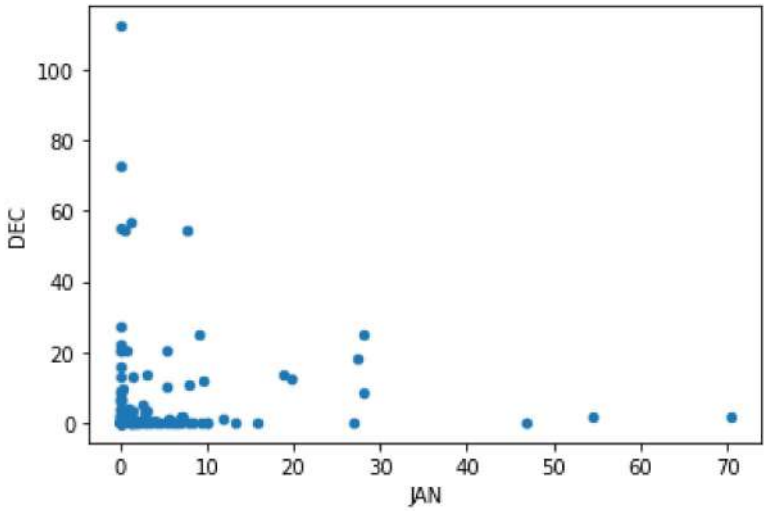
In [122]:
```
a1.plot.area()
```

Out[122]: <AxesSubplot:>



In [123]:
```
a1.plot.scatter('JAN','DEC')
```

Out[123]: <AxesSubplot:xlabel='JAN', ylabel='DEC'>



RAYALSEEMA

In [124]:
```
a1=df[df['SUBDIVISION']=='RAYALSEEMA']
a1
```

Out[124]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
3312	3312	RAYALSEEMA	1901	7.0	50.2	0.0	12.1	38.9	53.0	73.4	60.3	109.0	81.6
3313	3313	RAYALSEEMA	1902	10.0	0.2	1.7	11.0	36.8	73.6	41.3	148.3	181.7	188.5
3314	3314	RAYALSEEMA	1903	30.0	0.1	0.0	3.6	80.5	67.5	127.5	140.6	219.7	95.3
3315	3315	RAYALSEEMA	1904	14.8	0.0	1.7	7.1	58.8	39.8	75.1	19.4	84.7	111.5
3316	3316	RAYALSEEMA	1905	6.5	6.8	17.0	18.3	44.2	66.1	50.9	219.3	36.5	180.2
...	...	...	...	...	...	...	...	...	...	...	...	...	...
3422	3422	RAYALSEEMA	2011	0.8	12.1	0.0	34.6	33.0	44.5	128.9	163.6	71.2	107.5
3423	3423	RAYALSEEMA	2012	2.7	0.0	2.5	32.7	38.8	47.0	139.7	120.0	69.5	113.7
3424	3424	RAYALSEEMA	2013	1.3	30.6	11.5	26.8	38.9	73.8	95.7	110.3	163.2	169.3
3425	3425	RAYALSEEMA	2014	0.2	0.7	12.5	5.1	46.7	66.3	68.7	115.1	81.4	104.6
3426	3426	RAYALSEEMA	2015	1.9	0.0	13.4	73.4	39.7	73.0	43.1	123.6	136.3	106.7

115 rows × 20 columns

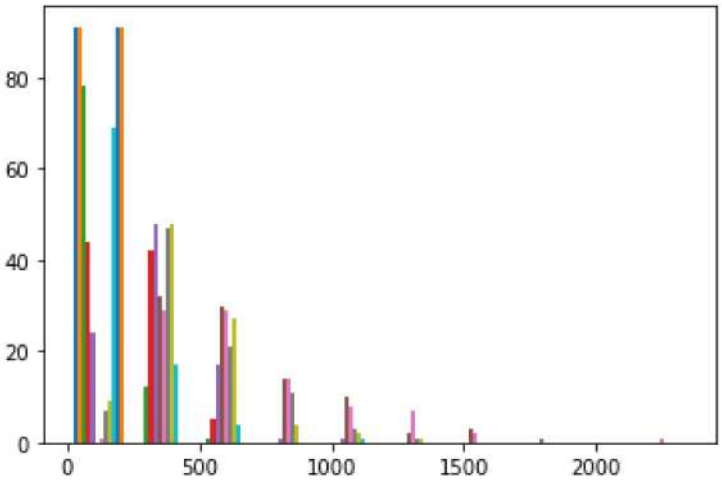
In [125]:
```
a1=a1.drop(['YEAR','SUBDIVISION','index','ANNUAL', 'Jan-Feb','Mar-May', 'Jun-S
a1
```

Out[125]:

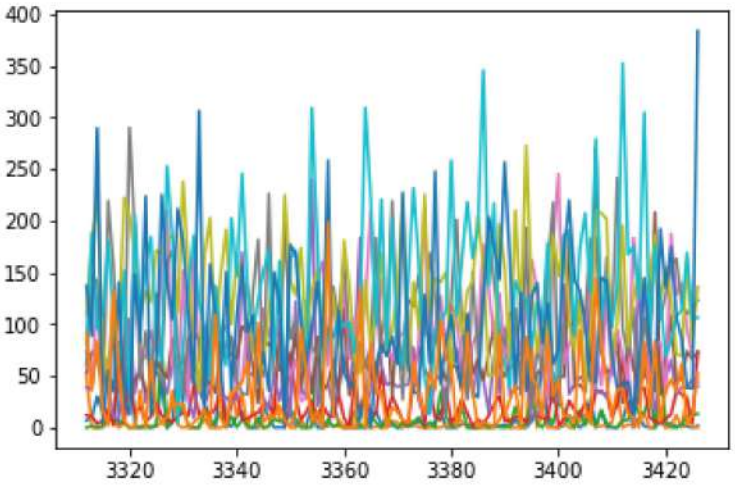
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
3312	7.0	50.2	0.0	12.1	38.9	53.0	73.4	60.3	109.0	81.6	137.2	91.3
3313	10.0	0.2	1.7	11.0	36.8	73.6	41.3	148.3	181.7	188.5	88.9	36.4
3314	30.0	0.1	0.0	3.6	80.5	67.5	127.5	140.6	219.7	95.3	289.4	84.0
3315	14.8	0.0	1.7	7.1	58.8	39.8	75.1	19.4	84.7	111.5	4.4	16.1
3316	6.5	6.8	17.0	18.3	44.2	66.1	50.9	219.3	36.5	180.2	55.4	2.0
...	...	...	...	...	...	...	...	...	...	...	...	...
3422	0.8	12.1	0.0	34.6	33.0	44.5	128.9	163.6	71.2	107.5	106.9	35.1
3423	2.7	0.0	2.5	32.7	38.8	47.0	139.7	120.0	69.5	113.7	86.6	61.9
3424	1.3	30.6	11.5	26.8	38.9	73.8	95.7	110.3	163.2	169.3	38.6	2.6
3425	0.2	0.7	12.5	5.1	46.7	66.3	68.7	115.1	81.4	104.6	37.8	12.8
3426	1.9	0.0	13.4	73.4	39.7	73.0	43.1	123.6	136.3	106.7	383.8	52.2

115 rows × 12 columns

In [243]:
```
plt.hist(a1)
plt.show()
```

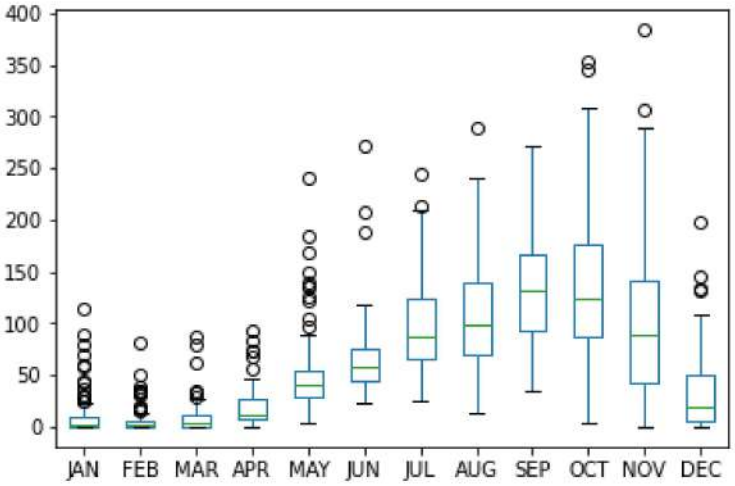


In [126]:
```
plt.plot(a1)
plt.show()
```



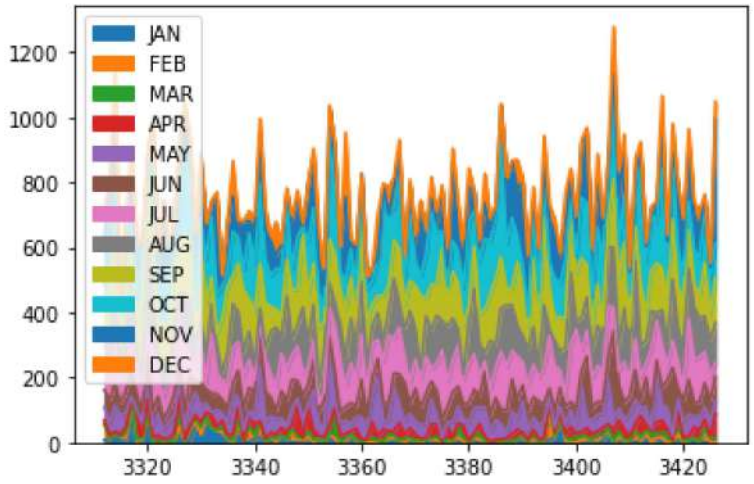
In [127]:
```
a1.plot.box()
```

Out[127]: <AxesSubplot:>



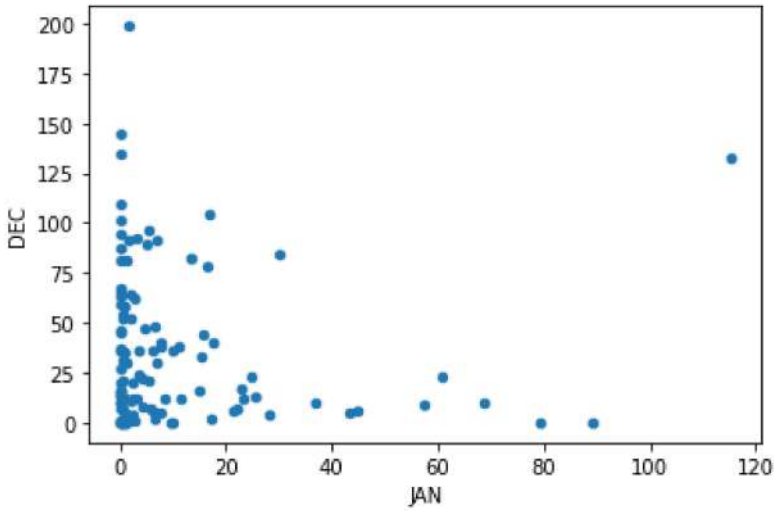
In [128]:
```
a1.plot.area()
```

Out[128]: <AxesSubplot:>



In [129]:
```
a1.plot.scatter('JAN','DEC')
```

Out[129]: <AxesSubplot:xlabel='JAN', ylabel='DEC'>



TELANGANA

In [130]:
```
a1=df[df['SUBDIVISION']=='TELANGANA']
a1
```

Out[130]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OC
3197	3197	TELANGANA	1901	6.9	41.8	7.8	45.2	22.0	123.6	237.8	177.2	77.7	75.
3198	3198	TELANGANA	1902	0.0	0.0	0.2	10.7	7.3	52.4	146.3	142.8	190.5	41.
3199	3199	TELANGANA	1903	12.9	4.6	0.0	9.9	40.7	99.2	505.2	246.7	191.9	155.
3200	3200	TELANGANA	1904	0.0	0.0	10.8	0.8	14.7	104.2	139.5	50.0	162.3	44.
3201	3201	TELANGANA	1905	0.0	4.3	12.8	27.6	32.2	129.5	82.4	237.3	179.1	19.
...	...	...	...	...	...	...	...	...	...	...	...	...	...
3307	3307	TELANGANA	2011	0.0	11.9	2.6	25.6	9.3	83.9	268.2	225.9	107.6	13.
3308	3308	TELANGANA	2012	6.7	0.0	0.2	14.0	8.4	124.4	300.3	229.9	202.4	83.
3309	3309	TELANGANA	2013	2.4	29.0	0.2	24.4	8.5	213.4	453.8	230.6	161.4	205.
3310	3310	TELANGANA	2014	0.2	2.9	58.3	10.3	73.3	62.3	146.0	205.2	146.8	29.
3311	3311	TELANGANA	2015	17.5	0.0	43.0	65.7	23.3	266.9	104.4	160.5	158.3	15.

115 rows × 20 columns

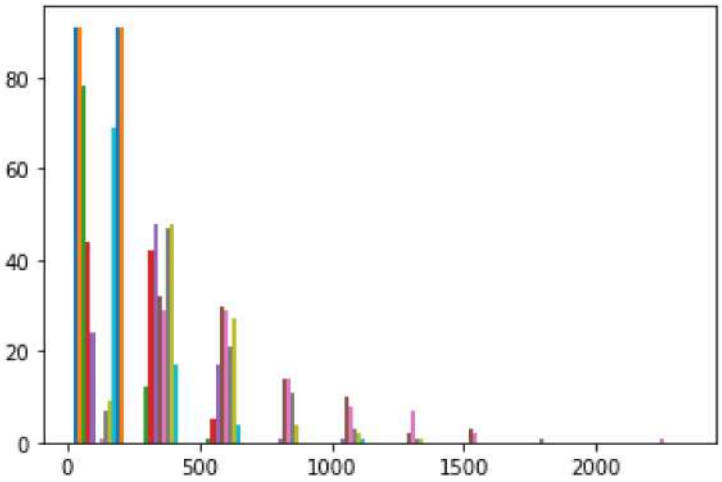
In [131]:
```
a1=a1.drop(['YEAR','SUBDIVISION','index','ANNUAL', 'Jan-Feb','Mar-May', 'Jun-S
a1
```

Out[131]:

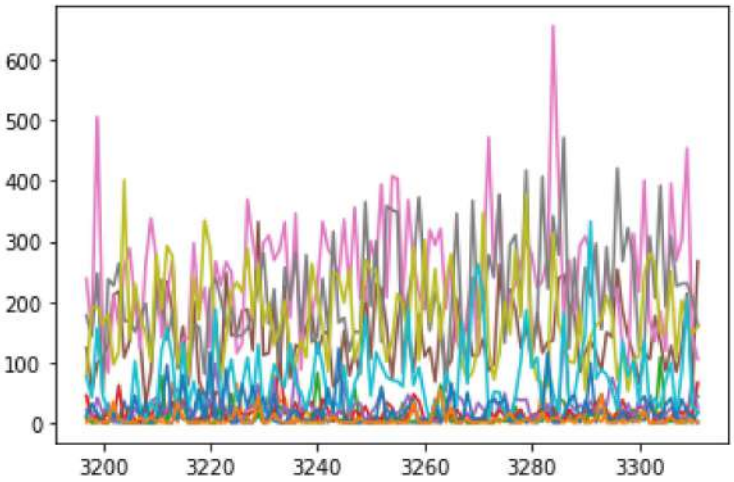
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
3197	6.9	41.8	7.8	45.2	22.0	123.6	237.8	177.2	77.7	75.5	12.2	0.0
3198	0.0	0.0	0.2	10.7	7.3	52.4	146.3	142.8	190.5	41.7	31.2	7.3
3199	12.9	4.6	0.0	9.9	40.7	99.2	505.2	246.7	191.9	155.8	15.5	1.1
3200	0.0	0.0	10.8	0.8	14.7	104.2	139.5	50.0	162.3	44.4	0.0	0.0
3201	0.0	4.3	12.8	27.6	32.2	129.5	82.4	237.3	179.1	19.6	0.0	0.0
...	...	...	...	...	...	...	...	...	...	...	...	...
3307	0.0	11.9	2.6	25.6	9.3	83.9	268.2	225.9	107.6	13.9	4.2	0.0
3308	6.7	0.0	0.2	14.0	8.4	124.4	300.3	229.9	202.4	83.6	38.7	0.0
3309	2.4	29.0	0.2	24.4	8.5	213.4	453.8	230.6	161.4	205.9	16.4	2.7
3310	0.2	2.9	58.3	10.3	73.3	62.3	146.0	205.2	146.8	29.6	10.8	0.7
3311	17.5	0.0	43.0	65.7	23.3	266.9	104.4	160.5	158.3	15.6	0.3	1.7

115 rows × 12 columns

In [244]:
```
plt.hist(a1)
plt.show()
```

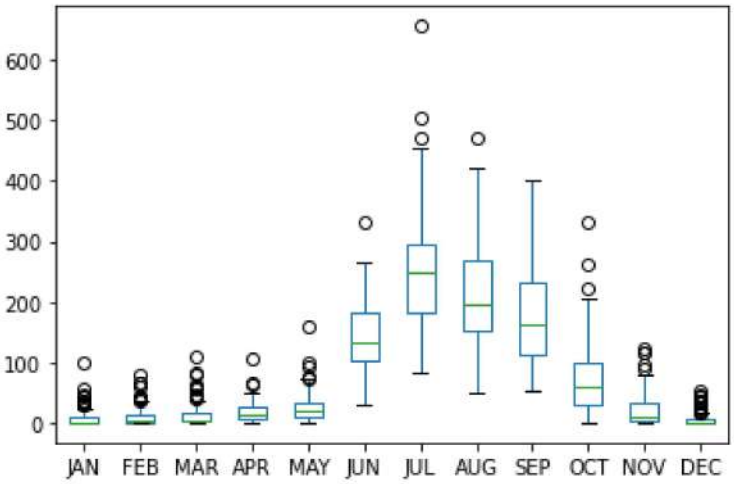


In [132]:
```
plt.plot(a1)
plt.show()
```



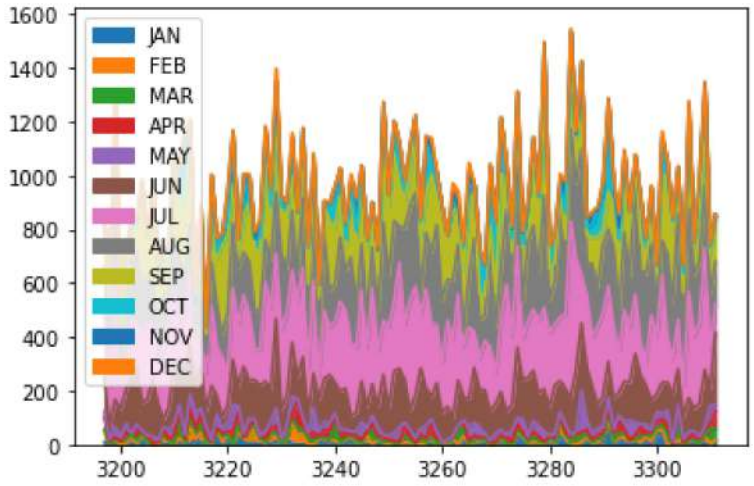
In [133]:
```
a1.plot.box()
```

Out[133]: <AxesSubplot:>



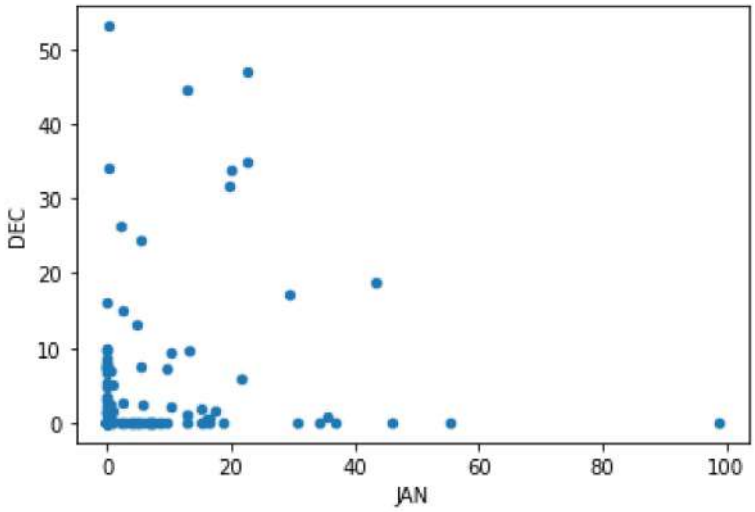
In [134]:
```
a1.plot.area()
```

Out[134]: <AxesSubplot:>



In [135]:
```
a1.plot.scatter('JAN','DEC')
```

Out[135]: <AxesSubplot:xlabel='JAN', ylabel='DEC'>



ORISSA

In [136]:
```
a1=df[df['SUBDIVISION']=='ORISSA']
a1
```

Out[136]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OC
667	667	ORISSA	1901	39.5	65.1	16.1	51.6	79.0	78.2	288.4	307.7	185.3	76.
668	668	ORISSA	1902	3.4	0.2	14.2	101.1	56.7	108.3	437.4	349.1	202.7	33.
669	669	ORISSA	1903	19.7	18.9	10.5	34.6	73.3	154.3	410.4	295.2	265.6	228.
670	670	ORISSA	1904	0.2	12.2	20.6	10.1	100.2	342.9	336.7	350.4	227.8	111.
671	671	ORISSA	1905	24.3	17.2	66.3	56.9	107.5	92.0	330.1	281.4	344.1	36.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	.
777	777	ORISSA	2011	3.7	16.2	4.9	58.2	75.6	210.1	199.6	358.6	398.7	20.
778	778	ORISSA	2012	50.8	3.6	0.9	34.8	21.3	169.6	324.3	417.0	242.4	66.
779	779	ORISSA	2013	3.3	7.8	2.1	53.6	57.7	272.6	380.0	254.9	208.1	391.
780	780	ORISSA	2014	0.0	17.6	25.1	11.7	111.9	92.2	496.2	386.3	281.1	111.
781	781	ORISSA	2015	15.1	3.3	10.5	67.6	32.6	238.6	294.8	264.0	237.0	24.

115 rows × 20 columns

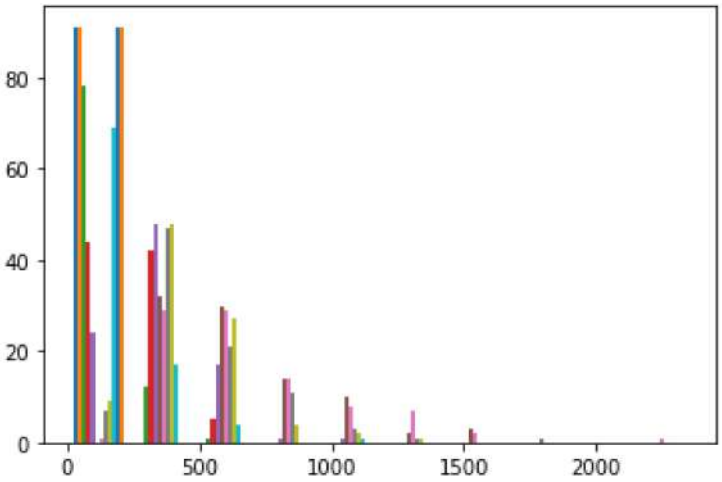
In [137]:
```
a1=a1.drop(['YEAR','SUBDIVISION','index','ANNUAL', 'Jan-Feb','Mar-May', 'Jun-S
a1
```

Out[137]:

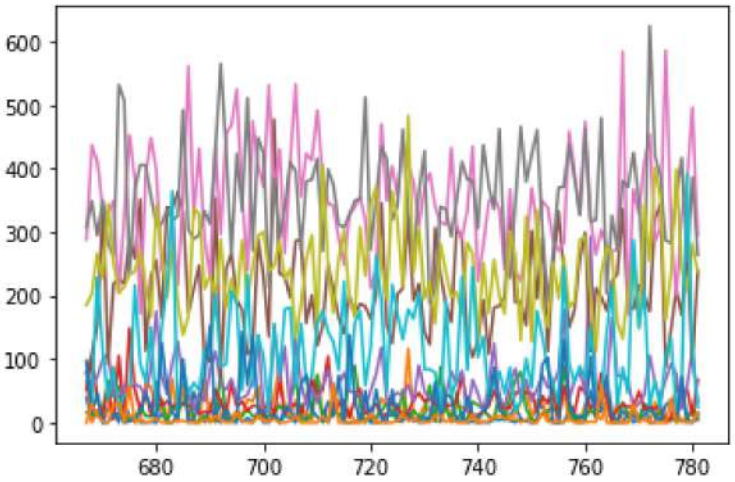
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
667	39.5	65.1	16.1	51.6	79.0	78.2	288.4	307.7	185.3	76.6	96.7	0.0
668	3.4	0.2	14.2	101.1	56.7	108.3	437.4	349.1	202.7	33.2	13.0	29.6
669	19.7	18.9	10.5	34.6	73.3	154.3	410.4	295.2	265.6	228.5	46.2	11.0
670	0.2	12.2	20.6	10.1	100.2	342.9	336.7	350.4	227.8	111.8	0.0	1.9
671	24.3	17.2	66.3	56.9	107.5	92.0	330.1	281.4	344.1	36.4	0.7	0.4
...	...	...	...	...	...	...	...	...	...	...	...	...
777	3.7	16.2	4.9	58.2	75.6	210.1	199.6	358.6	398.7	20.2	0.1	0.4
778	50.8	3.6	0.9	34.8	21.3	169.6	324.3	417.0	242.4	66.0	72.1	3.1
779	3.3	7.8	2.1	53.6	57.7	272.6	380.0	254.9	208.1	391.0	1.2	0.0
780	0.0	17.6	25.1	11.7	111.9	92.2	496.2	386.3	281.1	111.8	2.2	0.9
781	15.1	3.3	10.5	67.6	32.6	238.6	294.8	264.0	237.0	24.7	6.2	15.6

115 rows × 12 columns

In [245]:
```
plt.hist(a1)
plt.show()
```

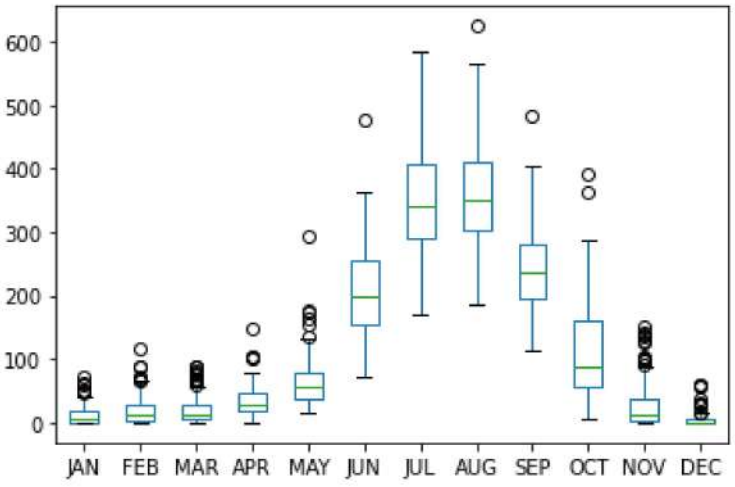


In [138]:
```
plt.plot(a1)
plt.show()
```



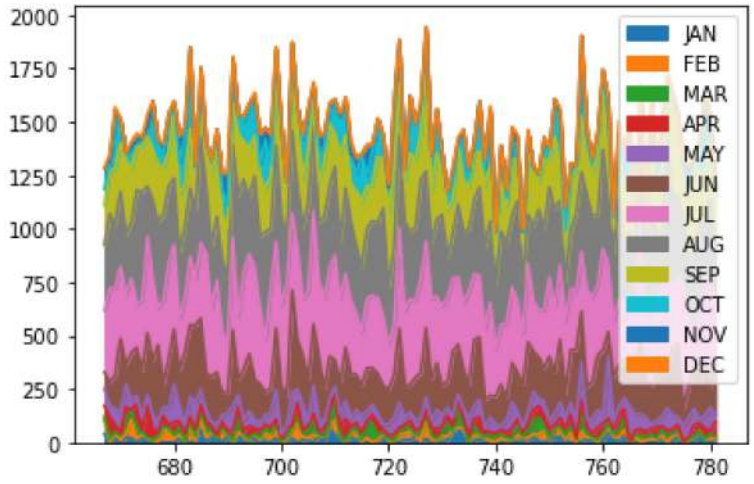
In [139]:
```
a1.plot.box()
```

Out[139]: <AxesSubplot:>



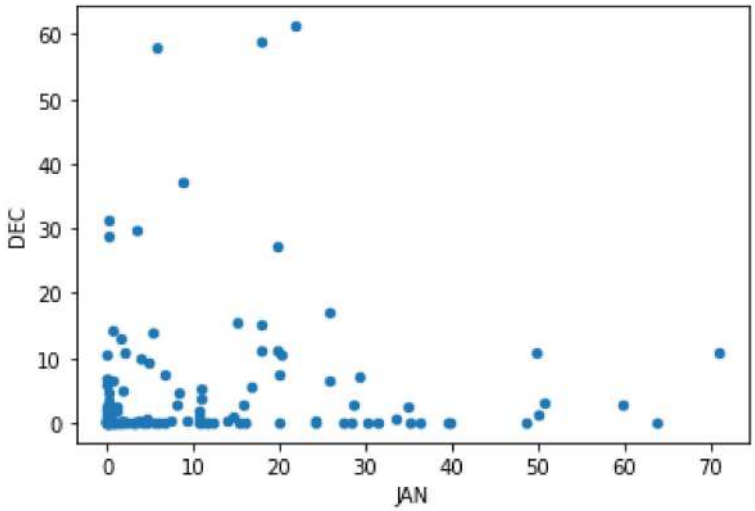
In [140]:
```
a1.plot.area()
```

Out[140]: <AxesSubplot:>



In [141]:
```
a1.plot.scatter('JAN','DEC')
```

Out[141]: <AxesSubplot:xlabel='JAN', ylabel='DEC'>



WEST UTTAR PRADESH

In [142]:
```
a1=df[df['SUBDIVISION']=='WEST UTTAR PRADESH']
a1
```

Out[142]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OC
1127	1127	WEST UTTAR PRADESH	1901	51.4	25.6	9.5	0.7	5.6	23.8	201.9	374.3	67.7	7.
1128	1128	WEST UTTAR PRADESH	1902	4.6	4.6	0.6	4.8	7.2	54.5	325.9	180.6	143.1	9.
1129	1129	WEST UTTAR PRADESH	1903	13.4	0.4	1.2	0.0	8.2	32.7	145.4	279.1	150.4	177.
1130	1130	WEST UTTAR PRADESH	1904	6.3	2.0	29.7	0.4	24.8	68.5	358.8	311.1	97.1	2.
1131	1131	WEST UTTAR PRADESH	1905	32.3	26.6	14.8	3.6	7.1	18.9	139.8	95.0	92.2	0.
...	...	...	...	...	...	...	...	...	...	...	...	...	...
1237	1237	WEST UTTAR PRADESH	2011	2.1	10.4	3.9	2.8	29.6	175.9	215.9	232.3	101.7	0.
1238	1238	WEST UTTAR PRADESH	2012	14.5	0.1	1.4	4.7	0.3	4.0	145.1	149.1	67.8	0.
1239	1239	WEST UTTAR PRADESH	2013	20.4	69.5	3.5	1.6	2.1	190.6	233.9	287.1	52.2	61.
1240	1240	WEST UTTAR PRADESH	2014	48.3	29.4	22.6	5.3	11.0	22.0	151.6	81.0	84.7	14.
1241	1241	WEST UTTAR PRADESH	2015	31.6	7.2	66.8	21.0	8.1	72.0	194.2	143.5	26.5	6.

115 rows × 20 columns

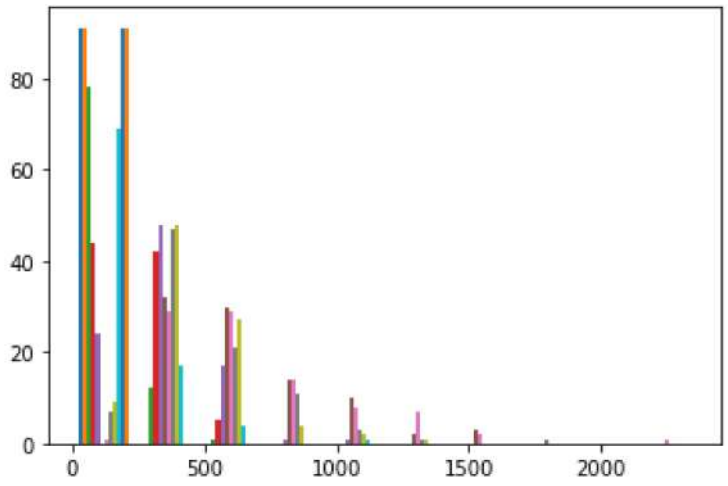
In [143]:
```
a1=a1.drop(['YEAR','SUBDIVISION','index','ANNUAL', 'Jan-Feb','Mar-May', 'Jun-S
a1
```

Out[143]:

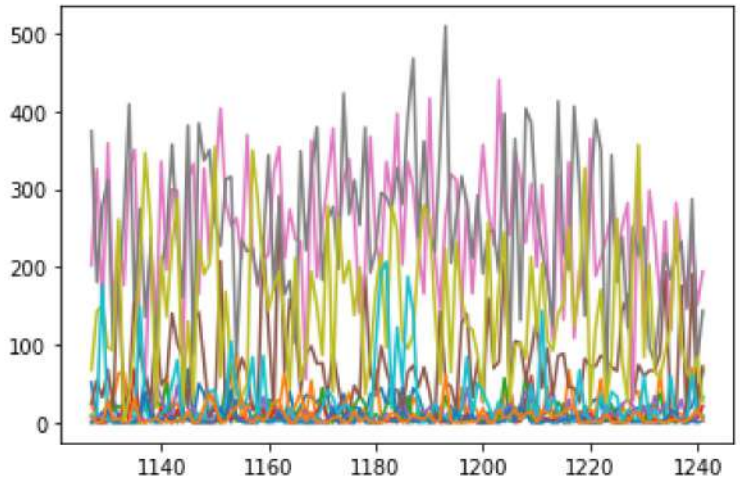
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1127	51.4	25.6	9.5	0.7	5.6	23.8	201.9	374.3	67.7	7.6	0.0	7.9
1128	4.6	4.6	0.6	4.8	7.2	54.5	325.9	180.6	143.1	9.6	0.9	0.2
1129	13.4	0.4	1.2	0.0	8.2	32.7	145.4	279.1	150.4	177.3	0.0	0.4
1130	6.3	2.0	29.7	0.4	24.8	68.5	358.8	311.1	97.1	2.7	15.7	28.2
1131	32.3	26.6	14.8	3.6	7.1	18.9	139.8	95.0	92.2	0.2	0.0	2.9
...	...	...	...	...	...	...	...	...	...	...	...	...
1237	2.1	10.4	3.9	2.8	29.6	175.9	215.9	232.3	101.7	0.7	0.5	1.5
1238	14.5	0.1	1.4	4.7	0.3	4.0	145.1	149.1	67.8	0.5	0.1	2.0
1239	20.4	69.5	3.5	1.6	2.1	190.6	233.9	287.1	52.2	61.2	1.7	8.9
1240	48.3	29.4	22.6	5.3	11.0	22.0	151.6	81.0	84.7	14.6	0.0	16.3
1241	31.6	7.2	66.8	21.0	8.1	72.0	194.2	143.5	26.5	6.9	2.0	3.0

115 rows × 12 columns

In [246]:
```
plt.hist(a1)
plt.show()
```

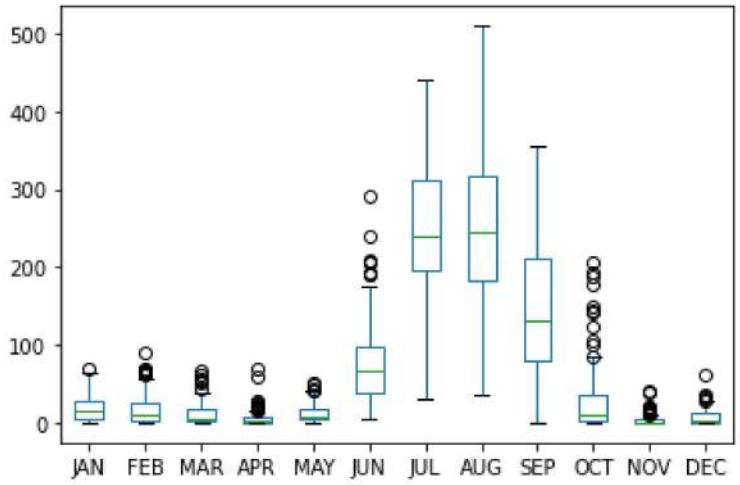


In [144]:
```
plt.plot(a1)
plt.show()
```



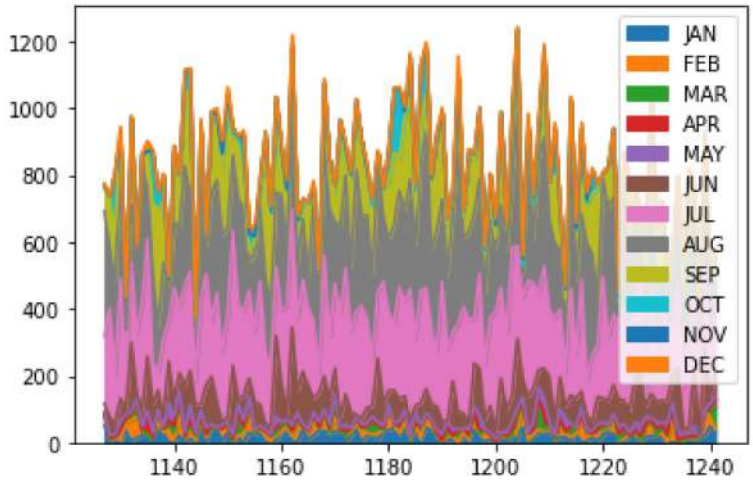
In [145]:
```
a1.plot.box()
```

Out[145]: <AxesSubplot:>



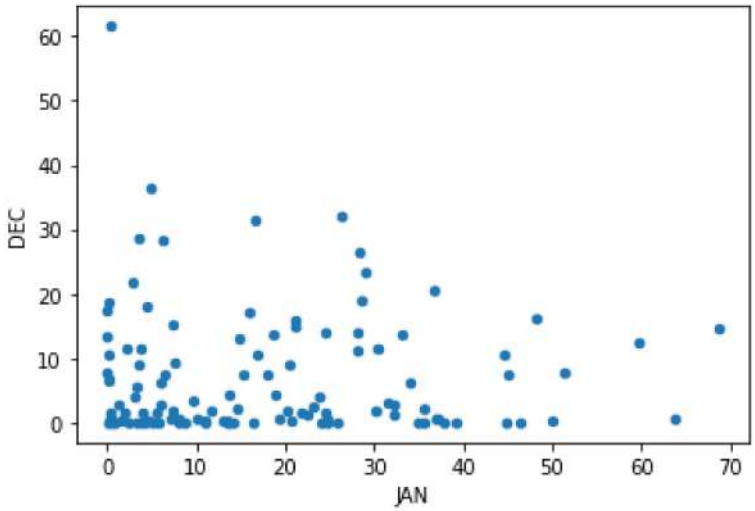
In [146]:
```
a1.plot.area()
```

Out[146]: <AxesSubplot:>



In [147]:
```
a1.plot.scatter('JAN','DEC')
```

Out[147]: <AxesSubplot:xlabel='JAN', ylabel='DEC'>



ASSAM & MEGHALAYA

In [148]:
```
a1=df[df['SUBDIVISION']=='ASSAM & MEGHALAYA']
a1
```

Out[148]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OC
207	207	ASSAM & MEGHALAYA	1901	27.1	19.5	30.6	223.0	207.0	524.9	430.6	464.1	291.4	163
208	208	ASSAM & MEGHALAYA	1902	9.3	10.2	105.6	350.0	262.1	620.7	510.8	536.0	441.3	97
209	209	ASSAM & MEGHALAYA	1903	19.9	25.4	103.6	140.6	206.6	607.4	362.7	551.9	306.4	159
210	210	ASSAM & MEGHALAYA	1904	11.1	56.1	51.9	457.1	375.2	385.7	477.6	438.8	245.9	115
211	211	ASSAM & MEGHALAYA	1905	19.9	16.9	137.9	213.0	275.5	521.7	439.1	649.1	276.0	200
...	...	...	...	...	...	...	...	...	...	...	...	...	...	
317	317	ASSAM & MEGHALAYA	2011	11.1	11.4	109.0	92.1	238.3	316.0	395.8	302.6	221.6	30
318	318	ASSAM & MEGHALAYA	2012	15.2	6.9	28.8	279.1	185.8	729.7	444.3	289.2	411.6	199
319	319	ASSAM & MEGHALAYA	2013	1.1	9.6	44.0	112.8	346.7	286.2	367.8	289.7	229.3	126
320	320	ASSAM & MEGHALAYA	2014	2.0	28.3	29.3	51.5	351.1	426.4	374.4	484.6	420.2	35
321	321	ASSAM & MEGHALAYA	2015	13.4	15.5	37.5	250.9	332.5	558.5	300.1	590.9	279.9	62

115 rows × 20 columns

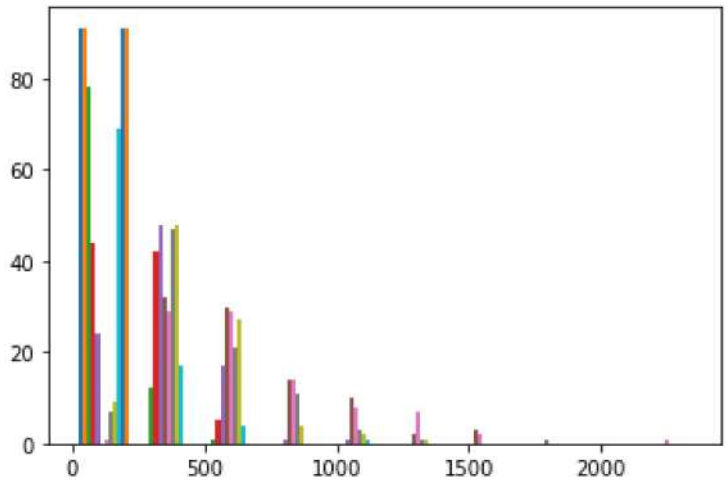
In [149]:
```
a1=a1.drop(['YEAR','SUBDIVISION','index','ANNUAL', 'Jan-Feb','Mar-May', 'Jun-S
a1
```

Out[149]:

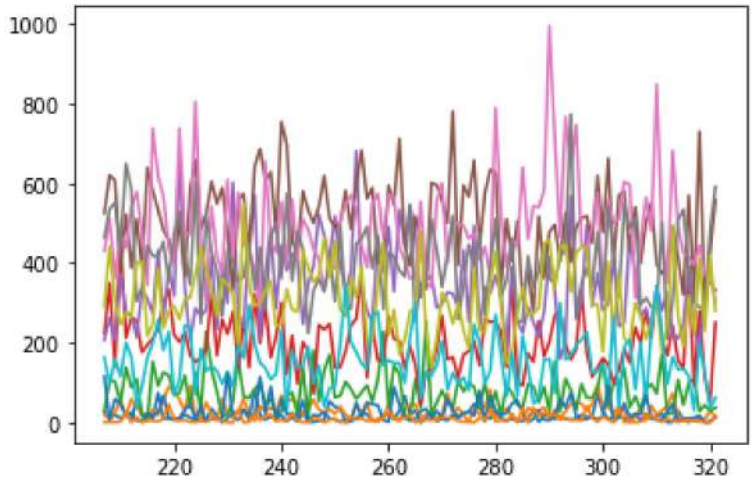
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
207	27.1	19.5	30.6	223.0	207.0	524.9	430.6	464.1	291.4	163.7	115.6	1.2
208	9.3	10.2	105.6	350.0	262.1	620.7	510.8	536.0	441.3	97.0	7.8	1.3
209	19.9	25.4	103.6	140.6	206.6	607.4	362.7	551.9	306.4	159.5	59.3	1.3
210	11.1	56.1	51.9	457.1	375.2	385.7	477.6	438.8	245.9	115.9	46.4	2.5
211	19.9	16.9	137.9	213.0	275.5	521.7	439.1	649.1	276.0	200.0	16.8	24.8
...	...	...	...	...	...	...	...	...	...	...	...	...
317	11.1	11.4	109.0	92.1	238.3	316.0	395.8	302.6	221.6	30.2	11.9	3.5
318	15.2	6.9	28.8	279.1	185.8	729.7	444.3	289.2	411.6	199.4	17.1	2.3
319	1.1	9.6	44.0	112.8	346.7	286.2	367.8	289.7	229.3	126.3	1.0	2.0
320	2.0	28.3	29.3	51.5	351.1	426.4	374.4	484.6	420.2	35.0	3.0	0.4
321	13.4	15.5	37.5	250.9	332.5	558.5	300.1	590.9	279.9	62.6	14.0	15.2

115 rows × 12 columns

In [247]:
```
plt.hist(a1)
plt.show()
```

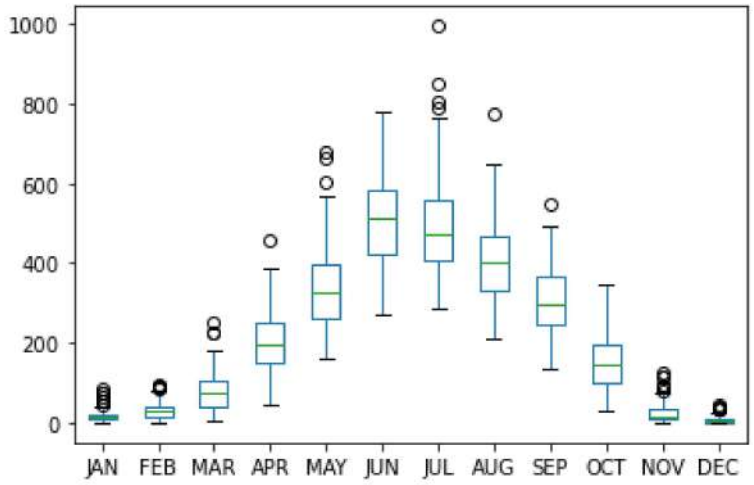


In [150]:
```
plt.plot(a1)
plt.show()
```



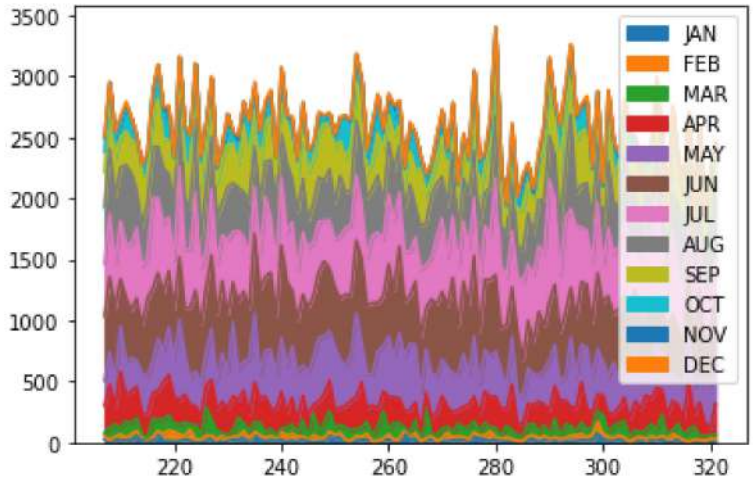
In [151]:
```
a1.plot.box()
```

Out[151]: <AxesSubplot:>



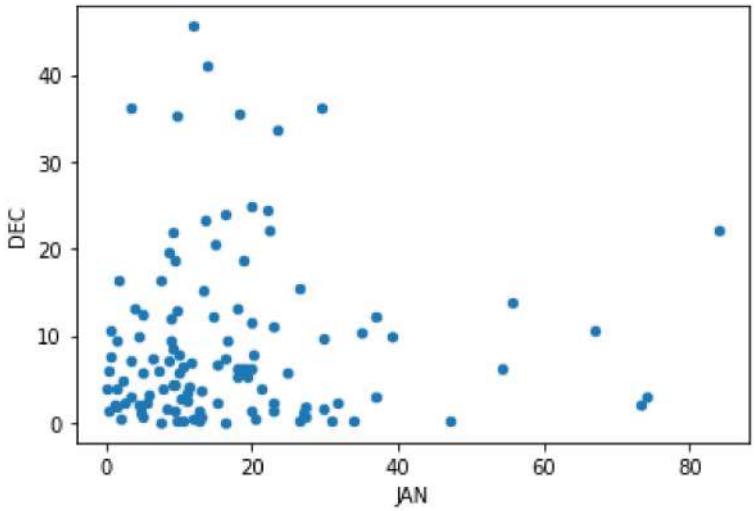
In [152]:
```
a1.plot.area()
```

Out[152]: <AxesSubplot:>



In [153]:
```
a1.plot.scatter('JAN','DEC')
```

Out[153]: <AxesSubplot:xlabel='JAN', ylabel='DEC'>



CHHATTISGARH

In [154]:
```
a1=df[df['SUBDIVISION']=='CHHATTISGARH']
a1
```

Out[154]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
2967	2967	CHHATTISGARH	1901	48.9	116.5	27.8	5.5	18.4	101.6	381.0	476.7	182.8	
2968	2968	CHHATTISGARH	1902	0.6	6.5	0.4	13.9	10.3	37.2	403.8	236.6	198.1	
2969	2969	CHHATTISGARH	1903	6.2	13.9	0.4	6.8	51.1	110.7	365.9	396.0	212.0	1
2970	2970	CHHATTISGARH	1904	0.0	8.6	32.3	0.2	77.5	369.5	303.6	483.6	86.8	1
2971	2971	CHHATTISGARH	1905	50.3	22.6	19.0	24.6	31.8	40.4	443.7	270.8	338.8	
...	...	...	...	...	...	...	...	...	...	...	...	...	...
3077	3077	CHHATTISGARH	2011	0.3	11.5	2.6	35.0	16.8	183.5	272.6	379.8	382.2	
3078	3078	CHHATTISGARH	2012	36.6	4.8	1.1	14.9	9.4	147.3	430.6	442.2	245.3	
3079	3079	CHHATTISGARH	2013	2.8	19.7	4.9	45.8	5.7	263.6	418.8	336.6	140.9	1
3080	3080	CHHATTISGARH	2014	2.3	29.0	21.4	17.3	25.0	104.9	416.7	327.7	252.7	
3081	3081	CHHATTISGARH	2015	15.8	1.2	21.2	37.0	13.0	257.6	248.6	286.6	216.9	

115 rows × 20 columns

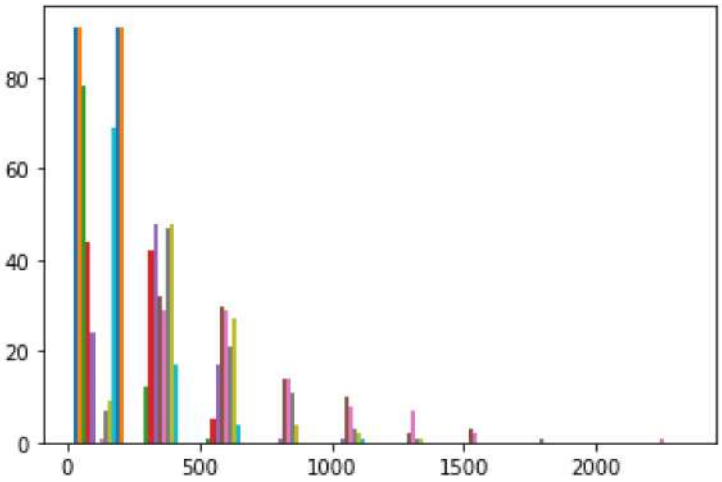
In [155]:
```
a1=a1.drop(['YEAR','SUBDIVISION','index','ANNUAL', 'Jan-Feb','Mar-May', 'Jun-S
a1
```

Out[155]:

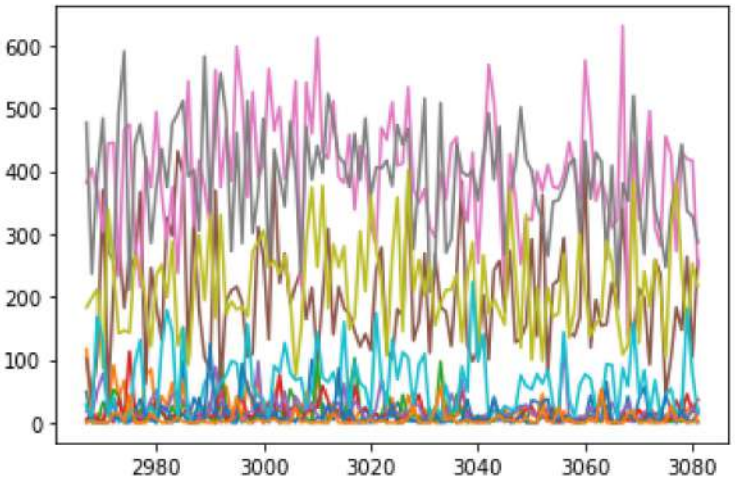
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2967	48.9	116.5	27.8	5.5	18.4	101.6	381.0	476.7	182.8	27.3	0.4	0.0
2968	0.6	6.5	0.4	13.9	10.3	37.2	403.8	236.6	198.1	4.7	8.1	3.7
2969	6.2	13.9	0.4	6.8	51.1	110.7	365.9	396.0	212.0	168.0	0.1	0.0
2970	0.0	8.6	32.3	0.2	77.5	369.5	303.6	483.6	86.8	129.3	1.0	0.0
2971	50.3	22.6	19.0	24.6	31.8	40.4	443.7	270.8	338.8	8.9	0.0	0.0
...	...	...	...	...	...	...	...	...	...	...	...	...
3077	0.3	11.5	2.6	35.0	16.8	183.5	272.6	379.8	382.2	15.5	0.0	2.8
3078	36.6	4.8	1.1	14.9	9.4	147.3	430.6	442.2	245.3	19.8	20.4	5.0
3079	2.8	19.7	4.9	45.8	5.7	263.6	418.8	336.6	140.9	180.9	0.3	0.0
3080	2.3	29.0	21.4	17.3	25.0	104.9	416.7	327.7	252.7	77.9	2.6	1.1
3081	15.8	1.2	21.2	37.0	13.0	257.6	248.6	286.6	216.9	17.7	0.6	1.5

115 rows × 12 columns

In [248]:
```
plt.hist(a1)
plt.show()
```

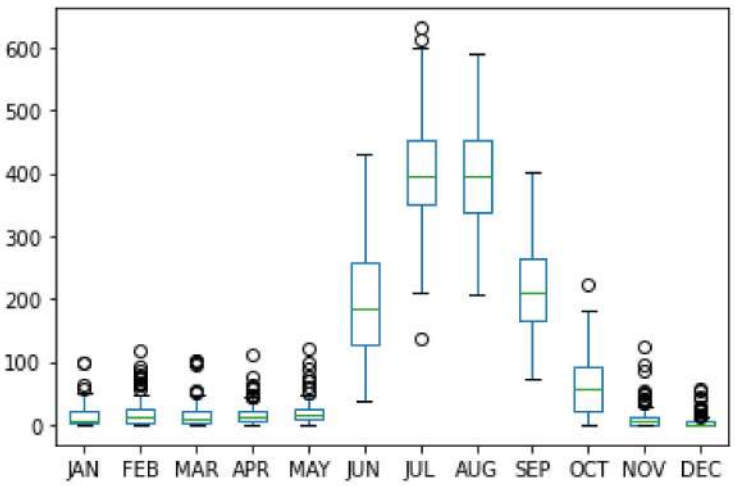


In [156]:
```
plt.plot(a1)
plt.show()
```



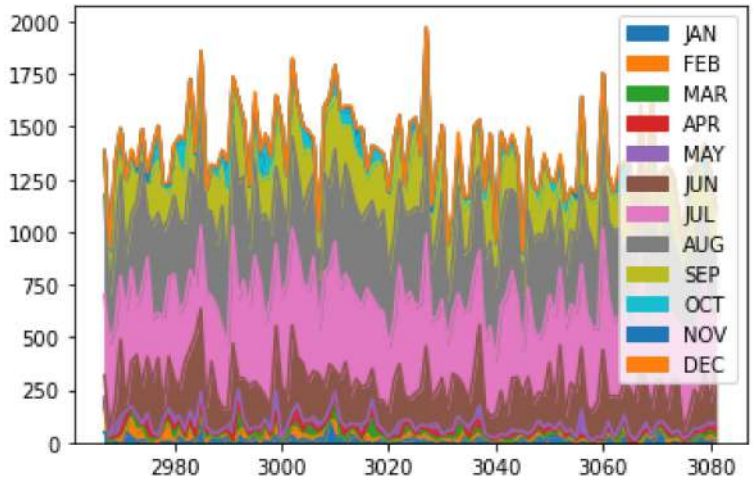
In [157]:
```
a1.plot.box()
```

Out[157]: <AxesSubplot:>



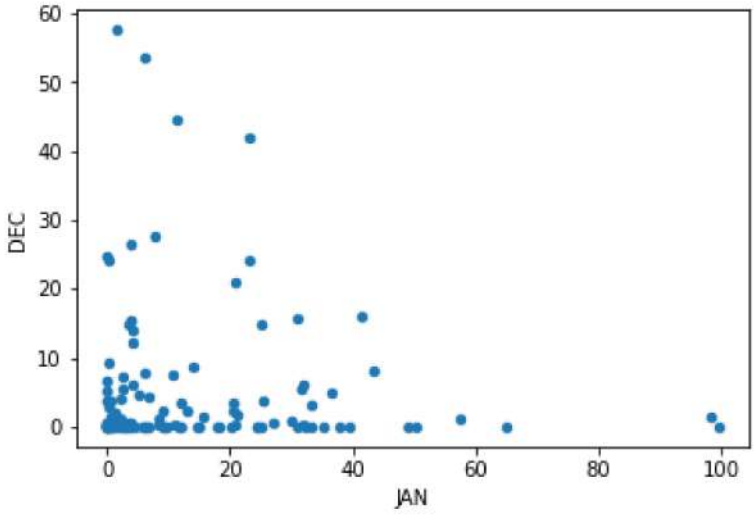
In [158]:
```
a1.plot.area()
```

Out[158]: <AxesSubplot:>



In [159]:
```
a1.plot.scatter('JAN','DEC')
```

Out[159]: <AxesSubplot:xlabel='JAN', ylabel='DEC'>



COASTAL ANDHRA PRADESH

In [160]:
```
a1=df[df['SUBDIVISION']=='COASTAL ANDHRA PRADESH']
a1
```

Out[160]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OC
3082	3082	COASTAL ANDHRA PRADESH	1901	18.8	80.9	7.2	28.7	68.7	77.7	113.0	133.7	125.3	173
3083	3083	COASTAL ANDHRA PRADESH	1902	2.0	0.0	2.8	23.9	37.6	72.6	144.5	236.1	204.5	262
3084	3084	COASTAL ANDHRA PRADESH	1903	0.8	13.3	0.2	6.2	73.4	154.0	248.6	258.0	216.5	159
3085	3085	COASTAL ANDHRA PRADESH	1904	1.3	0.0	5.4	3.0	136.3	107.8	120.2	117.7	116.8	240
3086	3086	COASTAL ANDHRA PRADESH	1905	1.1	16.7	68.0	37.0	68.8	84.4	64.6	210.8	170.2	66
...	...	...	...	...	...	...	...	...	...	...	...	...	...
3192	3192	COASTAL ANDHRA PRADESH	2011	0.0	17.9	0.9	62.3	67.9	86.8	196.0	215.8	129.7	74
3193	3193	COASTAL ANDHRA PRADESH	2012	37.6	0.0	2.7	24.0	39.3	95.4	221.9	221.2	246.5	140
3194	3194	COASTAL ANDHRA PRADESH	2013	2.0	29.6	0.2	48.0	28.2	127.5	162.4	123.1	132.0	411
3195	3195	COASTAL ANDHRA PRADESH	2014	0.4	1.2	9.1	6.0	112.9	45.7	151.8	177.8	144.5	195
3196	3196	COASTAL ANDHRA PRADESH	2015	2.0	0.6	5.5	32.3	34.1	283.8	116.0	192.0	201.8	59

115 rows × 20 columns

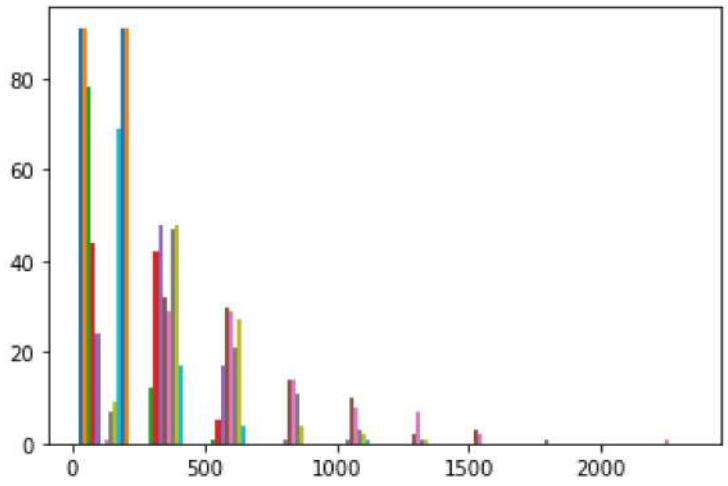
In [161]:
```
a1=a1.drop(['YEAR','SUBDIVISION','index','ANNUAL', 'Jan-Feb','Mar-May', 'Jun-S
a1
```

Out[161]:

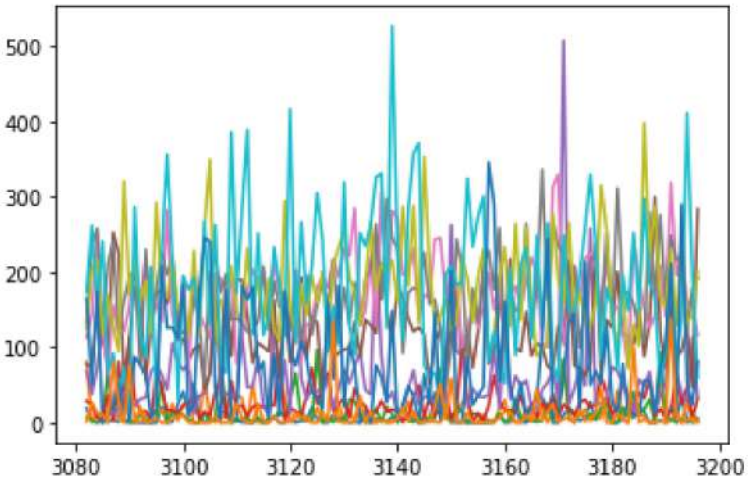
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
3082	18.8	80.9	7.2	28.7	68.7	77.7	113.0	133.7	125.3	173.4	164.8	1.5
3083	2.0	0.0	2.8	23.9	37.6	72.6	144.5	236.1	204.5	262.0	50.4	27.1
3084	0.8	13.3	0.2	6.2	73.4	154.0	248.6	258.0	216.5	159.1	173.9	12.1
3085	1.3	0.0	5.4	3.0	136.3	107.8	120.2	117.7	116.8	240.9	0.0	10.7
3086	1.1	16.7	68.0	37.0	68.8	84.4	64.6	210.8	170.2	66.0	7.4	0.0
...	...	...	...	...	...	...	...	...	...	...	...	...
3192	0.0	17.9	0.9	62.3	67.9	86.8	196.0	215.8	129.7	74.6	4.9	5.0
3193	37.6	0.0	2.7	24.0	39.3	95.4	221.9	221.2	246.5	140.0	289.7	0.0
3194	2.0	29.6	0.2	48.0	28.2	127.5	162.4	123.1	132.0	411.5	53.1	2.8
3195	0.4	1.2	9.1	6.0	112.9	45.7	151.8	177.8	144.5	195.6	23.7	6.4
3196	2.0	0.6	5.5	32.3	34.1	283.8	116.0	192.0	201.8	59.7	81.2	2.0

115 rows × 12 columns

In [249]:
```
plt.hist(a1)
plt.show()
```

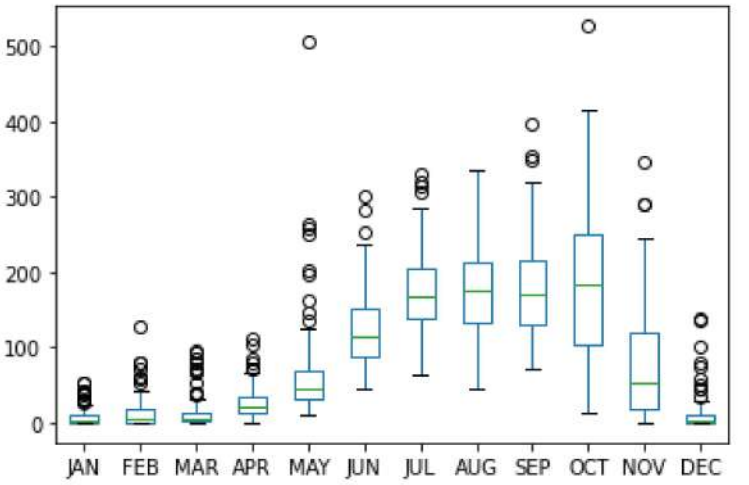


In [162]:
```
plt.plot(a1)
plt.show()
```



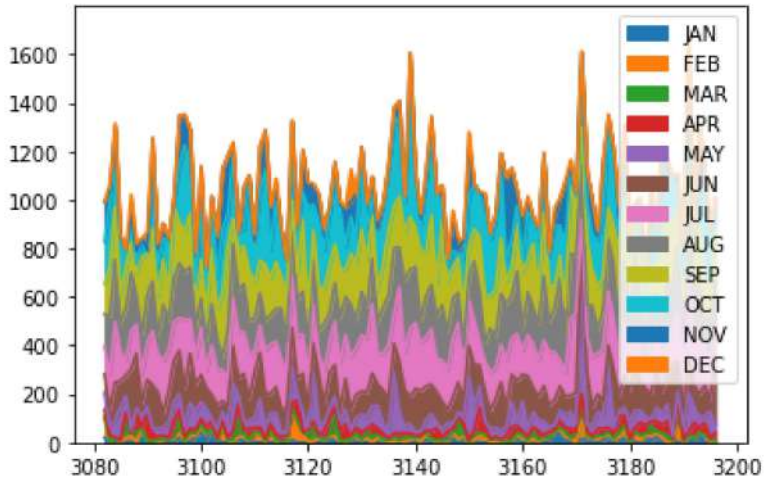
In [163]:
```
a1.plot.box()
```

Out[163]: <AxesSubplot:>



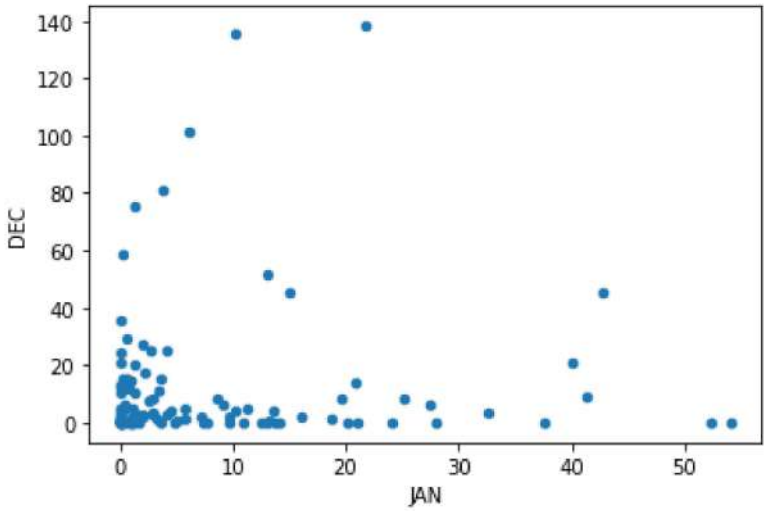
In [164]:
```
a1.plot.area()
```

Out[164]: <AxesSubplot:>



In [165]:
```
a1.plot.scatter('JAN','DEC')
```

Out[165]: <AxesSubplot:xlabel='JAN', ylabel='DEC'>



VIDARBHA

In [166]:
```
a1=df[df['SUBDIVISION']=='VIDARBHA']
a1
```

Out[166]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OC
2852	2852	VIDARBHA	1901	36.8	39.9	30.9	26.1	7.3	129.7	295.3	368.8	123.4	35.
2853	2853	VIDARBHA	1902	1.6	0.1	0.0	6.5	4.1	38.0	270.7	204.7	150.9	29.
2854	2854	VIDARBHA	1903	5.2	4.0	0.1	2.5	37.8	121.2	475.5	325.5	154.8	100.
2855	2855	VIDARBHA	1904	4.3	2.4	12.9	0.2	14.8	148.9	158.3	151.8	196.9	61.
2856	2856	VIDARBHA	1905	7.3	12.7	12.4	16.2	14.0	81.0	254.5	216.3	321.3	6.
...	...	...	...	...	...	...	...	...	...	...	...	...	...
2962	2962	VIDARBHA	2011	0.0	1.2	0.1	7.7	0.6	137.9	247.1	302.8	191.0	4.
2963	2963	VIDARBHA	2012	3.1	0.1	0.0	0.6	0.2	125.5	370.5	316.2	249.4	34.
2964	2964	VIDARBHA	2013	6.6	13.0	3.8	2.8	0.5	366.7	535.5	326.1	131.7	133.
2965	2965	VIDARBHA	2014	1.2	18.3	49.6	2.6	4.0	63.3	337.6	191.7	224.9	17.
2966	2966	VIDARBHA	2015	26.3	4.7	66.3	28.1	12.8	254.6	137.2	288.9	167.5	7.

115 rows × 20 columns

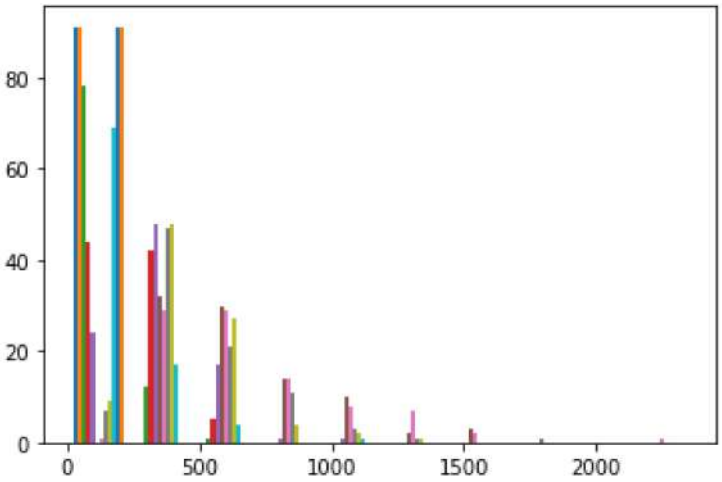
In [167]:
```
a1=a1.drop(['YEAR','SUBDIVISION','index','ANNUAL', 'Jan-Feb','Mar-May', 'Jun-S
a1
```

Out[167]:

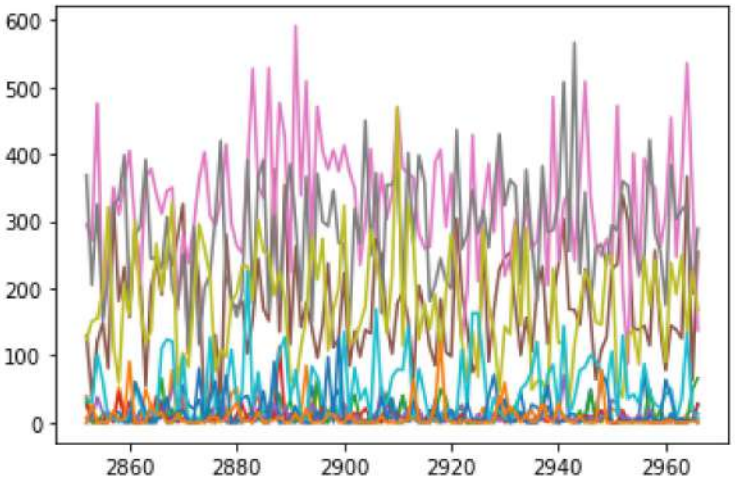
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2852	36.8	39.9	30.9	26.1	7.3	129.7	295.3	368.8	123.4	35.2	0.0	0.0
2853	1.6	0.1	0.0	6.5	4.1	38.0	270.7	204.7	150.9	29.6	16.1	26.7
2854	5.2	4.0	0.1	2.5	37.8	121.2	475.5	325.5	154.8	100.8	2.0	0.0
2855	4.3	2.4	12.9	0.2	14.8	148.9	158.3	151.8	196.9	61.7	0.0	0.9
2856	7.3	12.7	12.4	16.2	14.0	81.0	254.5	216.3	321.3	6.0	0.2	0.0
...	...	...	...	...	...	...	...	...	...	...	...	...
2962	0.0	1.2	0.1	7.7	0.6	137.9	247.1	302.8	191.0	4.7	0.0	0.0
2963	3.1	0.1	0.0	0.6	0.2	125.5	370.5	316.2	249.4	34.9	7.3	0.0
2964	6.6	13.0	3.8	2.8	0.5	366.7	535.5	326.1	131.7	133.5	0.0	0.0
2965	1.2	18.3	49.6	2.6	4.0	63.3	337.6	191.7	224.9	17.3	6.2	2.3
2966	26.3	4.7	66.3	28.1	12.8	254.6	137.2	288.9	167.5	7.0	0.0	0.2

115 rows × 12 columns

In [250]:
```
plt.hist(a1)
plt.show()
```

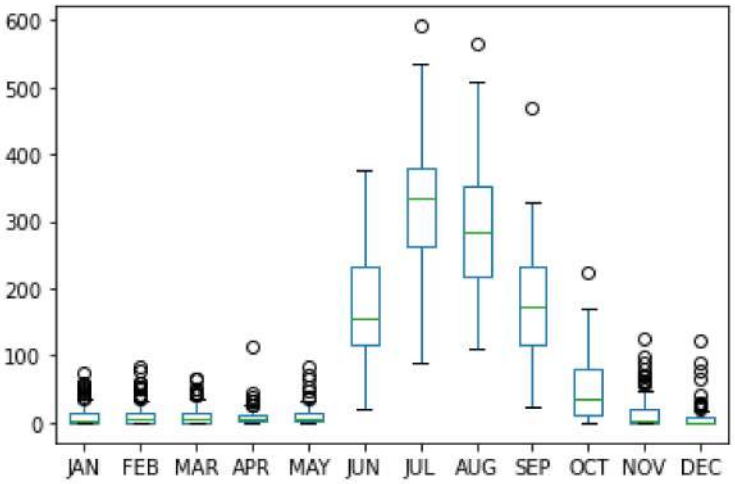


In [168]:
```
plt.plot(a1)
plt.show()
```



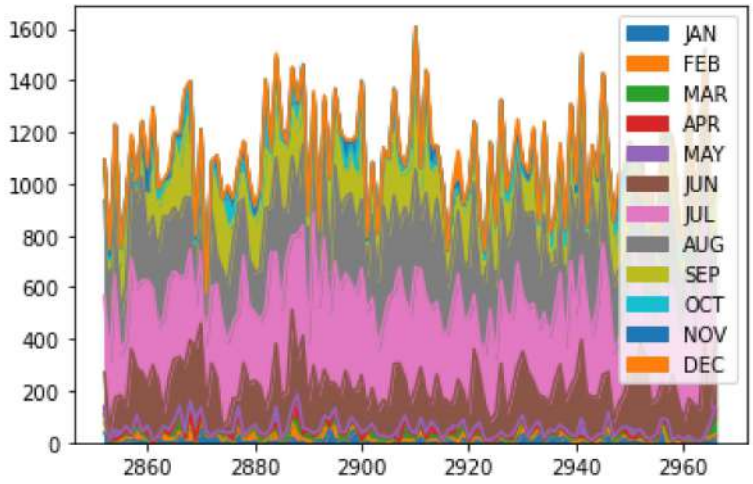
In [169]:
```
a1.plot.box()
```

Out[169]: <AxesSubplot:>



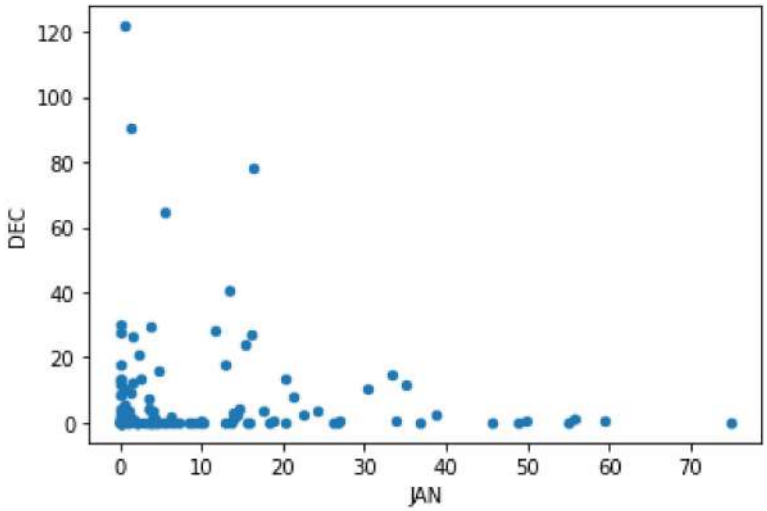
In [170]:
```
a1.plot.area()
```

Out[170]: <AxesSubplot:>



In [171]:
```
a1.plot.scatter('JAN','DEC')
```

Out[171]: <AxesSubplot:xlabel='JAN', ylabel='DEC'>



GANGETIC WEST BENGAL

In [172]:
```
a1=df[df['SUBDIVISION']=='GANGETIC WEST BENGAL']
a1
```

Out[172]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OC
552	552	GANGETIC WEST BENGAL	1901	37.1	58.4	3.9	64.1	121.7	198.0	280.8	275.7	313.5	51.
553	553	GANGETIC WEST BENGAL	1902	0.0	1.2	44.2	103.8	161.6	140.9	347.8	264.8	230.5	32.
554	554	GANGETIC WEST BENGAL	1903	17.5	24.6	37.3	30.6	78.5	201.7	179.6	277.6	300.7	198.
555	555	GANGETIC WEST BENGAL	1904	0.1	23.9	35.6	17.5	160.2	286.7	435.3	241.7	142.8	35.
556	556	GANGETIC WEST BENGAL	1905	30.9	49.6	84.7	84.9	156.8	70.9	525.5	263.6	287.6	107.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	.
662	662	GANGETIC WEST BENGAL	2011	2.5	2.7	40.5	75.0	132.6	434.5	219.9	443.2	295.9	36.
663	663	GANGETIC WEST BENGAL	2012	40.7	15.3	4.4	57.7	44.2	146.6	315.0	261.4	246.9	64.
664	664	GANGETIC WEST BENGAL	2013	2.5	10.0	4.8	45.6	195.9	233.4	263.2	401.4	254.0	353.
665	665	GANGETIC WEST BENGAL	2014	0.9	42.2	19.9	1.9	124.4	193.6	298.7	292.6	229.5	56.
666	666	GANGETIC WEST BENGAL	2015	12.9	5.5	19.3	88.7	57.6	247.2	633.1	260.6	164.0	32.

115 rows × 20 columns

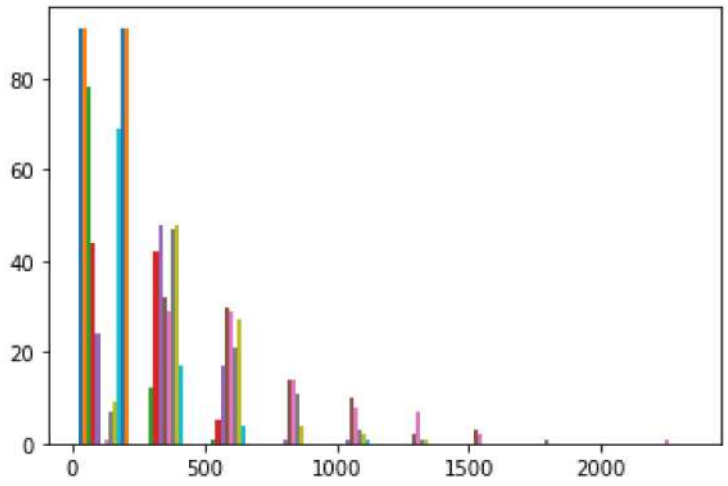
In [173]:
```
a1=a1.drop(['YEAR','SUBDIVISION','index','ANNUAL', 'Jan-Feb','Mar-May', 'Jun-S
a1
```

Out[173]:

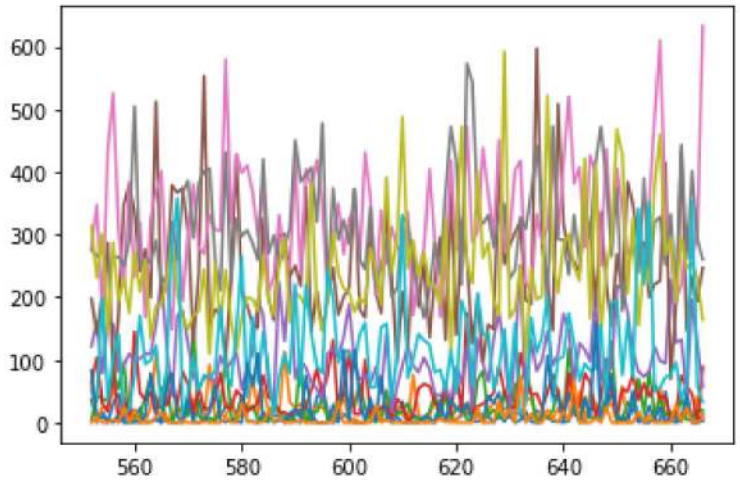
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
552	37.1	58.4	3.9	64.1	121.7	198.0	280.8	275.7	313.5	51.1	83.4	0.0
553	0.0	1.2	44.2	103.8	161.6	140.9	347.8	264.8	230.5	32.5	10.4	9.9
554	17.5	24.6	37.3	30.6	78.5	201.7	179.6	277.6	300.7	198.0	8.2	0.0
555	0.1	23.9	35.6	17.5	160.2	286.7	435.3	241.7	142.8	35.1	4.1	0.1
556	30.9	49.6	84.7	84.9	156.8	70.9	525.5	263.6	287.6	107.3	0.0	5.2
...	...	...	...	...	...	...	...	...	...	...	...	...
662	2.5	2.7	40.5	75.0	132.6	434.5	219.9	443.2	295.9	36.9	1.3	1.4
663	40.7	15.3	4.4	57.7	44.2	146.6	315.0	261.4	246.9	64.2	47.0	24.6
664	2.5	10.0	4.8	45.6	195.9	233.4	263.2	401.4	254.0	353.2	0.0	0.0
665	0.9	42.2	19.9	1.9	124.4	193.6	298.7	292.6	229.5	56.9	0.1	0.6
666	12.9	5.5	19.3	88.7	57.6	247.2	633.1	260.6	164.0	32.7	2.3	6.3

115 rows × 12 columns

In [251]:
```
plt.hist(a1)
plt.show()
```

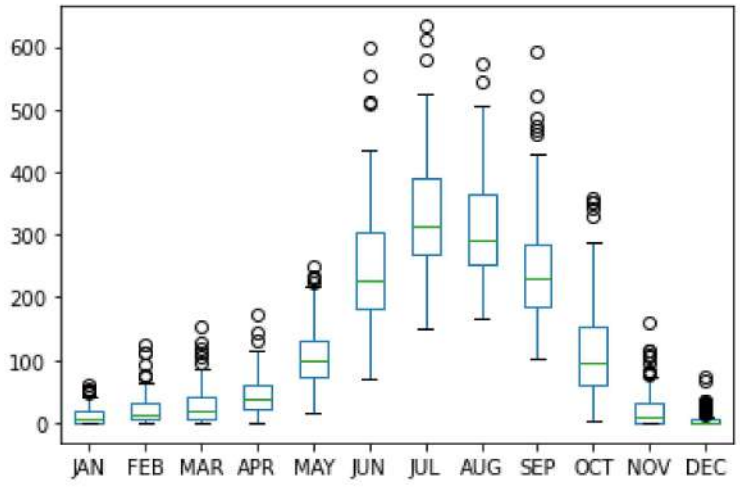


In [174]:
```
plt.plot(a1)
plt.show()
```



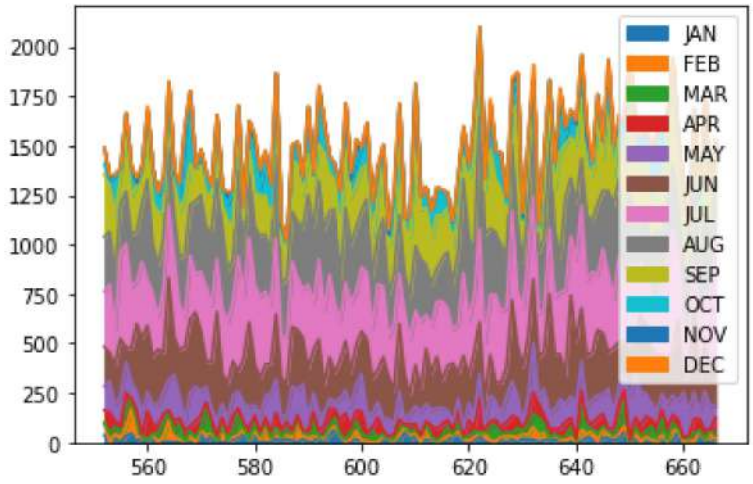
In [175]:
```
a1.plot.box()
```

Out[175]: <AxesSubplot:>



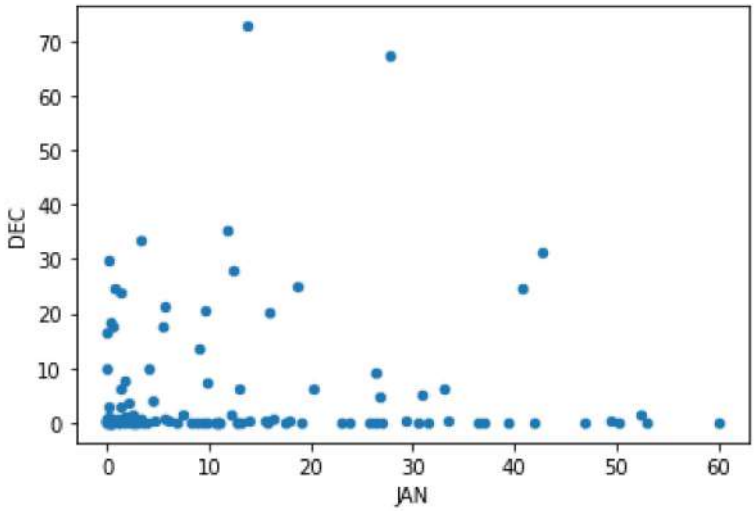
In [176]:
```
a1.plot.area()
```

Out[176]: <AxesSubplot:>



In [177]:
```
a1.plot.scatter('JAN','DEC')
```

Out[177]: <AxesSubplot:xlabel='JAN', ylabel='DEC'>



JAMMU & KASHMIR

In [178]:
```
a1=df[df['SUBDIVISION']=='JAMMU & KASHMIR']
a1
```

Out[178]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1702	1702	JAMMU & KASHMIR	1901	66.4	69.3	69.6	132.2	105.8	53.4	171.7	181.3	101.8
1703	1703	JAMMU & KASHMIR	1902	6.5	9.7	91.3	100.5	70.7	113.3	108.4	136.9	62.2
1704	1704	JAMMU & KASHMIR	1903	96.2	21.5	238.6	58.7	57.3	18.9	332.5	218.6	176.9
1705	1705	JAMMU & KASHMIR	1904	110.6	17.3	145.2	64.5	67.8	25.9	182.3	132.2	62.3
1706	1706	JAMMU & KASHMIR	1905	146.7	76.3	161.4	71.7	65.2	43.3	145.2	111.5	239.7
...	...	...	...	...	...	...	...	...	...	...	...	...
1812	1812	JAMMU & KASHMIR	2011	43.4	211.6	97.8	89.0	32.4	72.5	81.6	131.2	72.0
1813	1813	JAMMU & KASHMIR	2012	150.9	95.8	45.2	86.6	48.9	32.6	118.8	264.9	106.7
1814	1814	JAMMU & KASHMIR	2013	52.2	136.4	41.9	47.4	47.4	80.5	125.1	219.1	41.2
1815	1815	JAMMU & KASHMIR	2014	75.8	64.0	153.1	76.1	52.7	25.3	100.5	134.6	362.8
1816	1816	JAMMU & KASHMIR	2015	27.9	187.2	341.4	173.3	64.6	121.4	233.2	129.2	130.2

114 rows × 20 columns

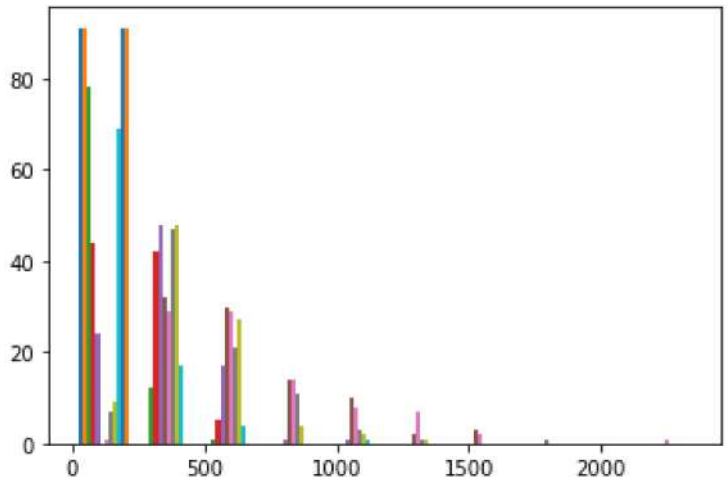
In [179]:
```
a1=a1.drop(['YEAR','SUBDIVISION','index','ANNUAL', 'Jan-Feb','Mar-May', 'Jun-S
a1
```

Out[179]:

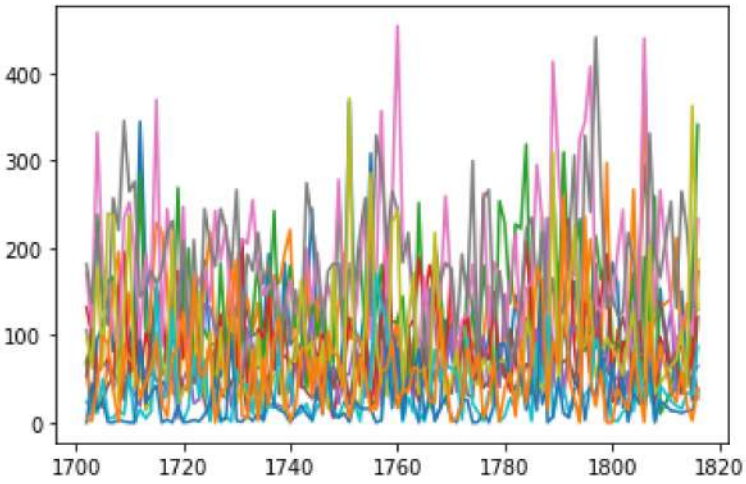
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1702	66.4	69.3	69.6	132.2	105.8	53.4	171.7	181.3	101.8	24.1	0.0	4.4
1703	6.5	9.7	91.3	100.5	70.7	113.3	108.4	136.9	62.2	15.1	44.0	1.8
1704	96.2	21.5	238.6	58.7	57.3	18.9	332.5	218.6	176.9	10.7	15.0	41.8
1705	110.6	17.3	145.2	64.5	67.8	25.9	182.3	132.2	62.3	50.0	24.8	99.2
1706	146.7	76.3	161.4	71.7	65.2	43.3	145.2	111.5	239.7	5.8	0.6	90.2
...	...	...	...	...	...	...	...	...	...	...	...	...
1812	43.4	211.6	97.8	89.0	32.4	72.5	81.6	131.2	72.0	19.4	12.9	23.8
1813	150.9	95.8	45.2	86.6	48.9	32.6	118.8	264.9	106.7	15.7	10.8	57.8
1814	52.2	136.4	41.9	47.4	47.4	80.5	125.1	219.1	41.2	34.4	13.4	20.3
1815	75.8	64.0	153.1	76.1	52.7	25.3	100.5	134.6	362.8	32.2	14.1	2.3
1816	27.9	187.2	341.4	173.3	64.6	121.4	233.2	129.2	130.2	87.1	38.1	39.3

114 rows × 12 columns

In [252]:
```
plt.hist(a1)
plt.show()
```

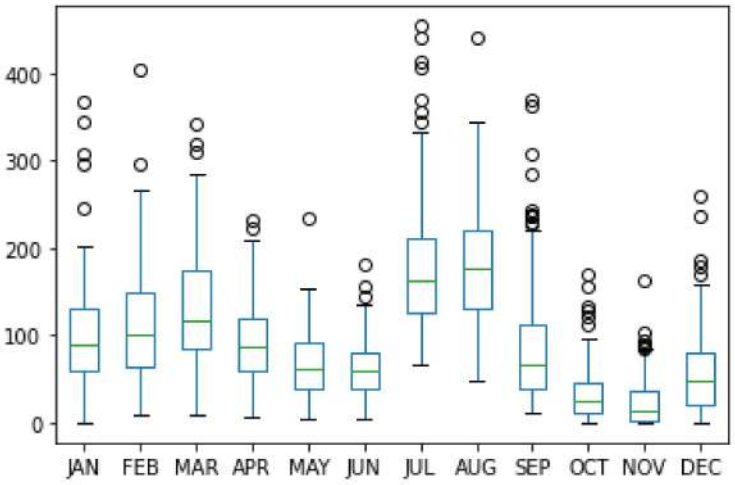


In [180]:
```
plt.plot(a1)
plt.show()
```



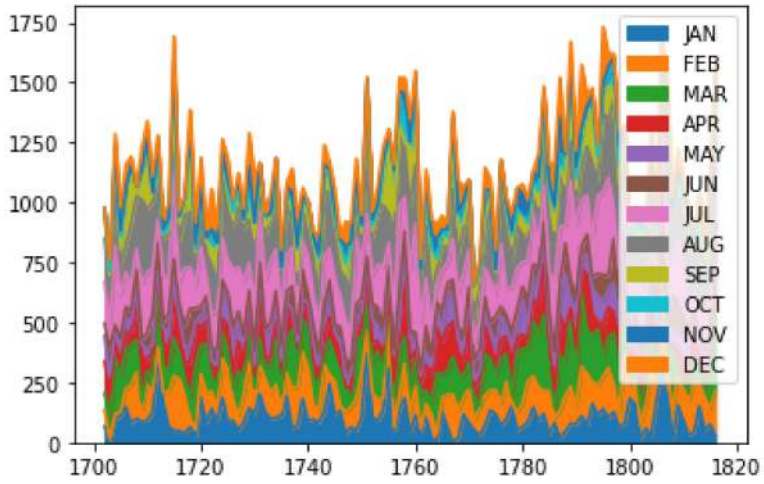
In [181]:
```
a1.plot.box()
```

Out[181]: <AxesSubplot:>



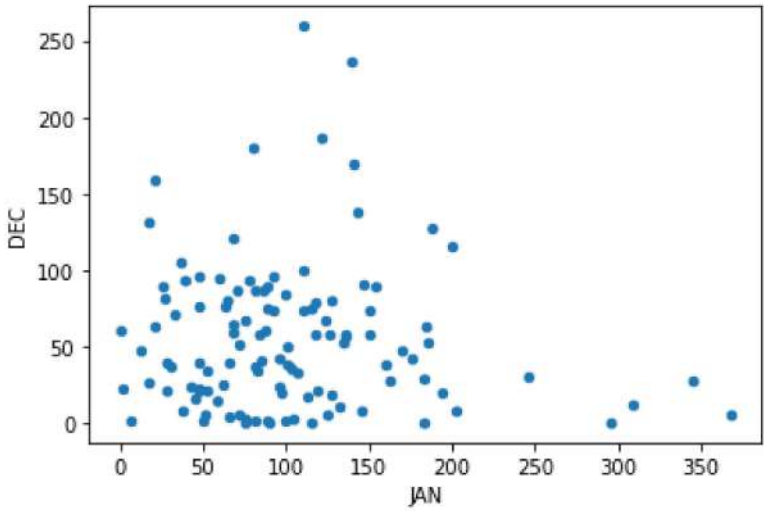
In [182]:
```
a1.plot.area()
```

Out[182]: <AxesSubplot:>



In [183]:
```
a1.plot.scatter('JAN','DEC')
```

Out[183]: <AxesSubplot:xlabel='JAN', ylabel='DEC'>



NAGA MANI MIZO TRIPURA

In [184]:
```
a1=df[df['SUBDIVISION']=='NAGA MANI MIZO TRIPURA']
a1
```

Out[184]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OC
322	322	NAGA MANI MIZO TRIPURA	1901	11.7	18.1	29.4	206.2	124.0	443.3	331.4	466.0	304.1	166
323	323	NAGA MANI MIZO TRIPURA	1902	4.8	0.5	36.3	297.8	215.5	480.1	392.4	312.8	318.7	102
324	324	NAGA MANI MIZO TRIPURA	1903	6.5	40.5	139.8	45.5	159.9	458.6	300.2	470.6	366.1	166
325	325	NAGA MANI MIZO TRIPURA	1904	2.3	46.9	47.5	290.3	230.5	455.3	423.5	423.6	375.8	128
326	326	NAGA MANI MIZO TRIPURA	1905	9.1	35.3	306.5	161.7	193.6	339.7	450.1	429.9	320.1	246
...	...	...	...	...	...	...	...	...	...	...	...	...	...
432	432	NAGA MANI MIZO TRIPURA	2011	12.6	3.6	51.4	81.1	334.9	374.2	313.3	367.6	258.3	92
433	433	NAGA MANI MIZO TRIPURA	2012	24.5	10.2	20.3	243.5	163.5	396.2	280.1	342.7	248.7	160
434	434	NAGA MANI MIZO TRIPURA	2013	0.2	5.7	19.7	60.3	348.9	206.6	255.9	291.3	241.4	125
435	435	NAGA MANI MIZO TRIPURA	2014	1.2	21.0	25.4	49.6	192.5	268.3	295.7	372.3	300.9	69
436	436	NAGA MANI MIZO TRIPURA	2015	14.4	14.2	21.6	253.5	198.3	283.9	413.6	334.2	255.9	118

115 rows × 20 columns

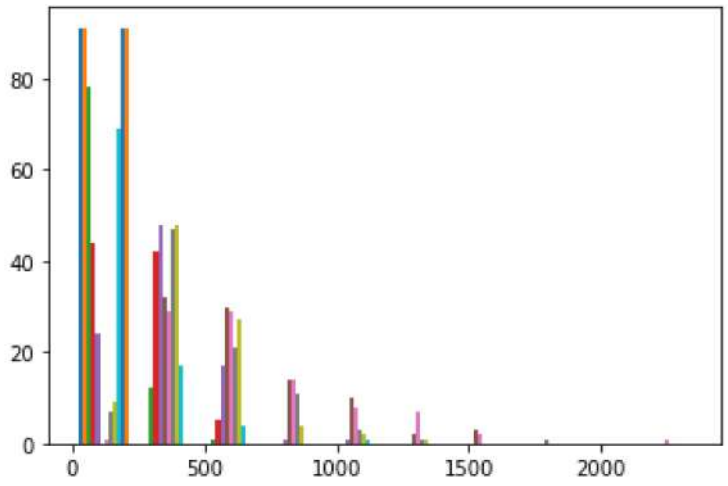
In [185]:
```
a1=a1.drop(['YEAR','SUBDIVISION','index','ANNUAL', 'Jan-Feb','Mar-May', 'Jun-S
a1
```

Out[185]:

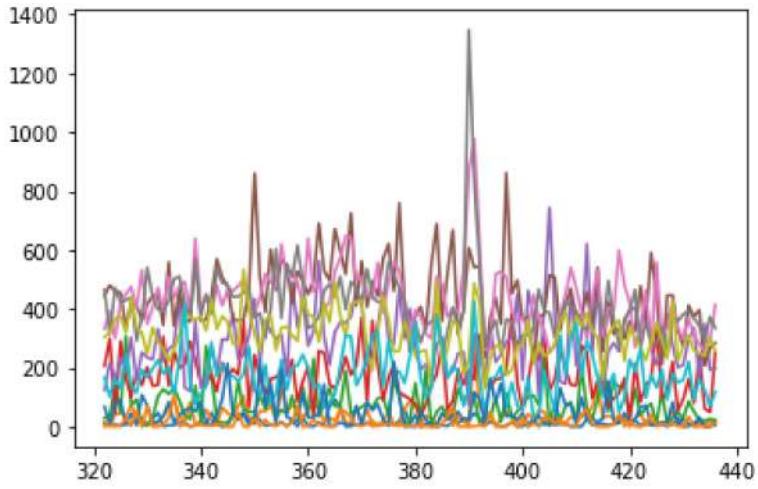
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
322	11.7	18.1	29.4	206.2	124.0	443.3	331.4	466.0	304.1	166.7	67.4	0.0
323	4.8	0.5	36.3	297.8	215.5	480.1	392.4	312.8	318.7	102.4	8.9	4.7
324	6.5	40.5	139.8	45.5	159.9	458.6	300.2	470.6	366.1	166.4	76.7	0.1
325	2.3	46.9	47.5	290.3	230.5	455.3	423.5	423.6	375.8	128.9	90.0	5.0
326	9.1	35.3	306.5	161.7	193.6	339.7	450.1	429.9	320.1	246.4	8.0	27.1
...	...	...	...	...	...	...	...	...	...	...	...	...
432	12.6	3.6	51.4	81.1	334.9	374.2	313.3	367.6	258.3	92.6	2.4	0.2
433	24.5	10.2	20.3	243.5	163.5	396.2	280.1	342.7	248.7	160.9	32.0	0.4
434	0.2	5.7	19.7	60.3	348.9	206.6	255.9	291.3	241.4	125.6	0.3	1.2
435	1.2	21.0	25.4	49.6	192.5	268.3	295.7	372.3	300.9	69.6	3.3	0.1
436	14.4	14.2	21.6	253.5	198.3	283.9	413.6	334.2	255.9	118.7	3.9	10.0

115 rows × 12 columns

In [253]:
```
plt.hist(a1)
plt.show()
```

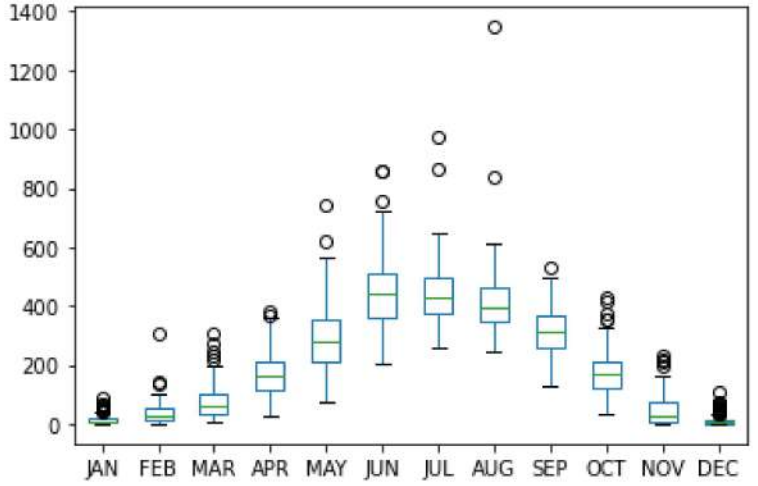


In [186]:
```
plt.plot(a1)
plt.show()
```



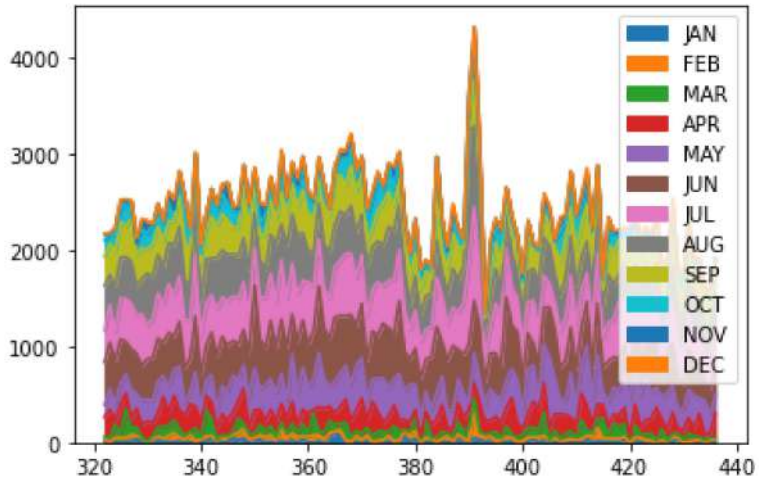
In [187]:
```
a1.plot.box()
```

Out[187]: <AxesSubplot:>



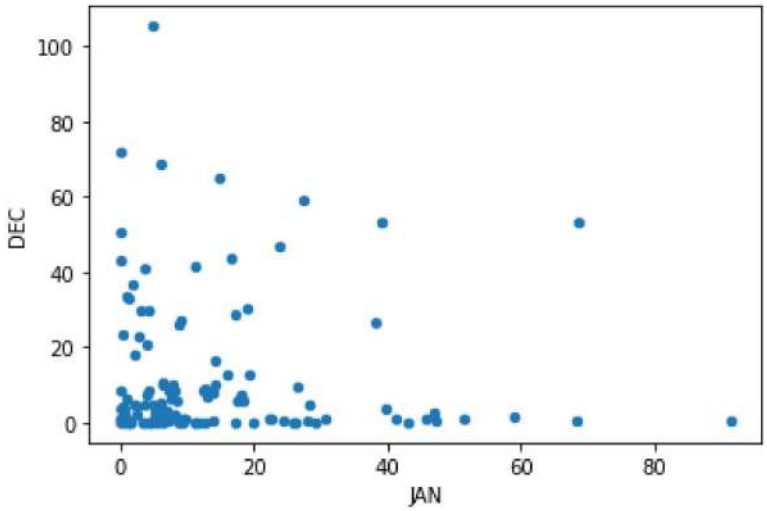
In [188]:
```
a1.plot.area()
```

Out[188]: <AxesSubplot:>



In [189]:
```
a1.plot.scatter('JAN','DEC')
```

Out[189]: <AxesSubplot:xlabel='JAN', ylabel='DEC'>



WEST MADHYA PRADESH

In [190]:
```
a1=df[df['SUBDIVISION']=='WEST MADHYA PRADESH']
a1
```

Out[190]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
2047	2047	WEST MADHYA PRADESH	1901	25.8	5.8	5.8	2.8	2.1	41.2	228.9	349.9	47.9	5.6
2048	2048	WEST MADHYA PRADESH	1902	22.1	8.4	0.0	2.0	5.9	35.9	401.9	179.4	194.1	37.9
2049	2049	WEST MADHYA PRADESH	1903	5.3	0.0	0.0	0.0	22.3	50.6	304.9	261.1	250.2	55.1
2050	2050	WEST MADHYA PRADESH	1904	3.2	15.5	14.8	0.0	12.0	96.6	273.0	218.6	125.9	3.3
2051	2051	WEST MADHYA PRADESH	1905	3.5	4.4	1.1	0.8	3.0	36.1	326.3	137.6	183.5	0.3
...	...	...	...	...	...	...	...	...	...	...	...	...	...
2157	2157	WEST MADHYA PRADESH	2011	0.0	1.7	0.1	1.8	3.6	241.5	306.7	343.3	165.0	0.2
2158	2158	WEST MADHYA PRADESH	2012	6.2	0.0	0.0	0.9	3.1	48.2	439.2	341.2	194.3	2.1
2159	2159	WEST MADHYA PRADESH	2013	1.7	31.1	8.5	2.8	0.4	263.7	485.1	432.6	98.9	68.7
2160	2160	WEST MADHYA PRADESH	2014	25.6	34.4	4.6	1.4	1.4	30.6	337.4	211.0	192.6	7.0
2161	2161	WEST MADHYA PRADESH	2015	40.2	6.4	53.5	13.3	2.0	154.1	428.2	276.6	55.6	11.0

114 rows × 20 columns

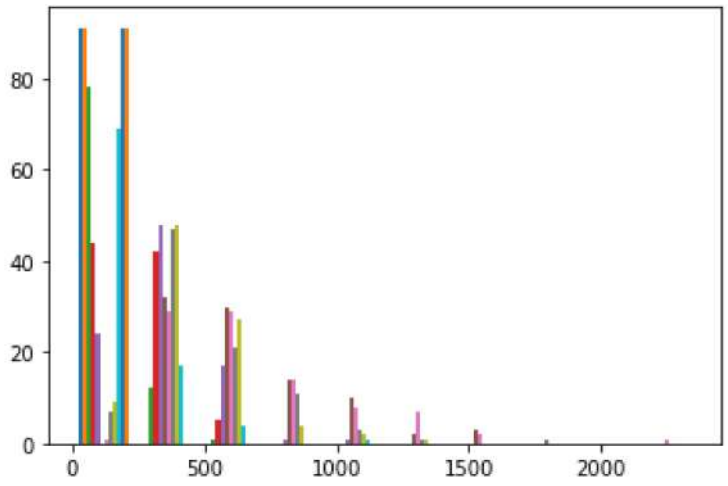
In [191]:
```
a1=a1.drop(['YEAR','SUBDIVISION','index','ANNUAL', 'Jan-Feb','Mar-May', 'Jun-S
a1
```

Out[191]:

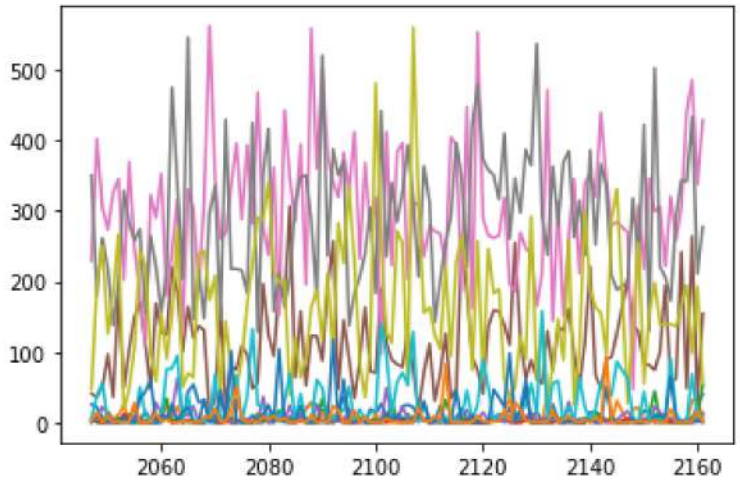
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2047	25.8	5.8	5.8	2.8	2.1	41.2	228.9	349.9	47.9	5.6	0.0	2.4
2048	22.1	8.4	0.0	2.0	5.9	35.9	401.9	179.4	194.1	37.9	10.0	14.2
2049	5.3	0.0	0.0	0.0	22.3	50.6	304.9	261.1	250.2	55.1	0.0	0.0
2050	3.2	15.5	14.8	0.0	12.0	96.6	273.0	218.6	125.9	3.3	1.8	9.6
2051	3.5	4.4	1.1	0.8	3.0	36.1	326.3	137.6	183.5	0.3	0.0	0.0
...	...	...	...	...	...	...	...	...	...	...	...	...
2157	0.0	1.7	0.1	1.8	3.6	241.5	306.7	343.3	165.0	0.2	0.0	0.0
2158	6.2	0.0	0.0	0.9	3.1	48.2	439.2	341.2	194.3	2.1	0.0	0.0
2159	1.7	31.1	8.5	2.8	0.4	263.7	485.1	432.6	98.9	68.7	0.3	2.4
2160	25.6	34.4	4.6	1.4	1.4	30.6	337.4	211.0	192.6	7.0	3.0	15.8
2161	40.2	6.4	53.5	13.3	2.0	154.1	428.2	276.6	55.6	11.0	0.3	1.0

114 rows × 12 columns

In [254]:
```
plt.hist(a1)
plt.show()
```

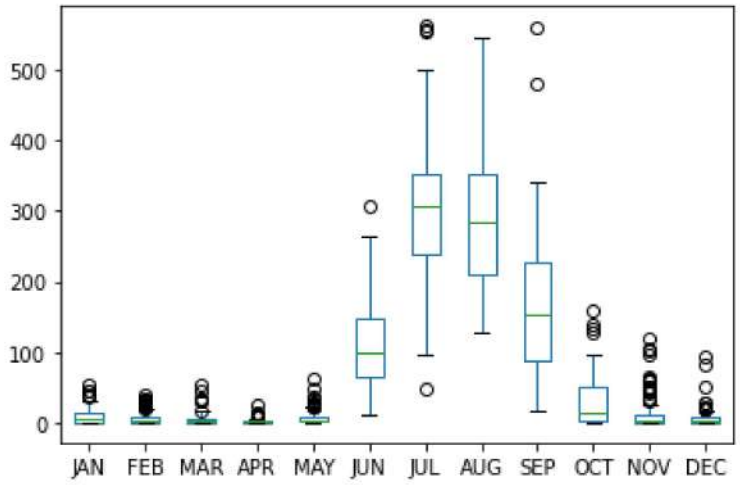


In [192]:
```
plt.plot(a1)
plt.show()
```



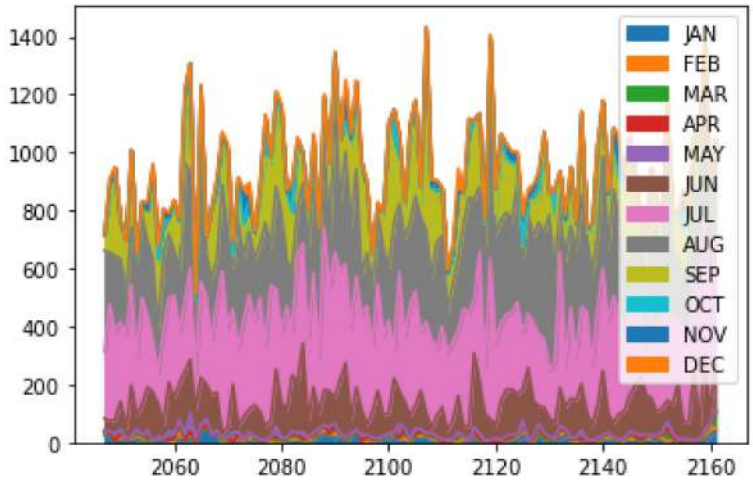
In [193]:
```
a1.plot.box()
```

Out[193]: <AxesSubplot:>



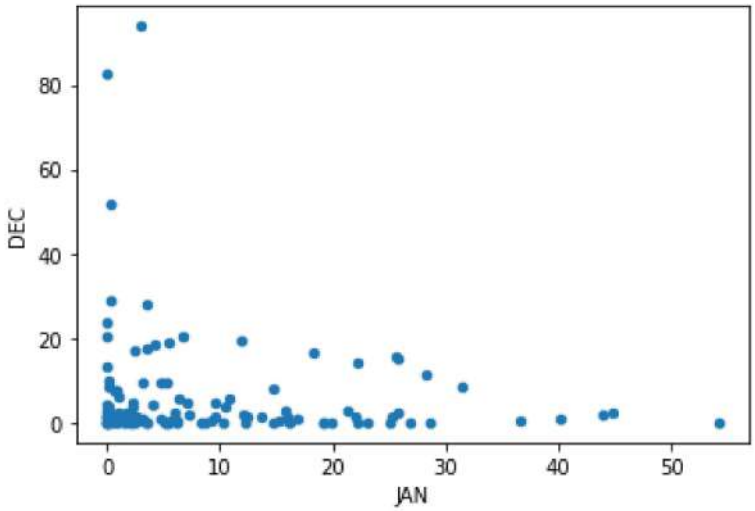
In [194]:
```
a1.plot.area()
```

Out[194]: <AxesSubplot:>



In [195]:
```
a1.plot.scatter('JAN','DEC')
```

Out[195]: <AxesSubplot:xlabel='JAN', ylabel='DEC'>



SOUTH INTERIOR KARNATAKA

In [196]:
```
a1=df[df['SUBDIVISION']=='SOUTH INTERIOR KARNATAKA']
a1
```

Out[196]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OC
3772	3772	SOUTH INTERIOR KARNATAKA	1901	4.9	31.8	3.0	32.7	109.6	106.0	210.0	109.2	140.8	170
3773	3773	SOUTH INTERIOR KARNATAKA	1902	1.9	0.5	6.7	42.6	97.7	91.7	210.0	82.1	138.4	219
3774	3774	SOUTH INTERIOR KARNATAKA	1903	0.3	0.0	1.1	11.6	125.1	129.7	284.4	155.7	197.1	154
3775	3775	SOUTH INTERIOR KARNATAKA	1904	1.0	0.5	5.2	43.5	144.7	167.9	197.1	73.2	89.6	120
3776	3776	SOUTH INTERIOR KARNATAKA	1905	1.7	7.9	14.2	23.6	118.6	95.9	148.4	140.6	43.1	142
...	...	...	...	...	...	...	...	...	...	...	...	...	...
3882	3882	SOUTH INTERIOR KARNATAKA	2011	2.1	12.4	12.4	80.2	83.5	177.1	202.4	199.5	111.2	144
3883	3883	SOUTH INTERIOR KARNATAKA	2012	4.6	5.5	8.1	99.0	45.6	81.8	144.7	236.5	100.6	62
3884	3884	SOUTH INTERIOR KARNATAKA	2013	0.5	10.1	11.7	34.6	95.6	176.2	307.4	151.7	191.8	103
3885	3885	SOUTH INTERIOR KARNATAKA	2014	0.4	2.4	17.7	46.7	130.5	106.8	271.6	254.6	161.6	152
3886	3886	SOUTH INTERIOR KARNATAKA	2015	1.7	0.2	24.4	80.5	125.3	218.7	112.0	136.6	164.5	106

115 rows × 20 columns

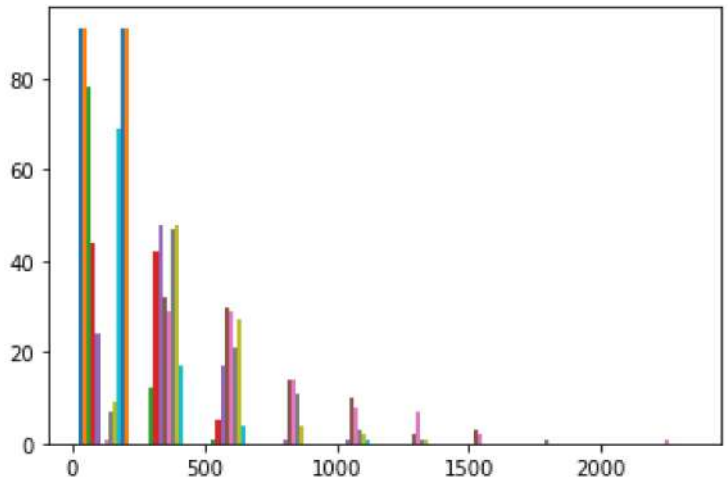
In [197]:
```
a1=a1.drop(['YEAR','SUBDIVISION','index','ANNUAL', 'Jan-Feb','Mar-May', 'Jun-S
a1
```

Out[197]:

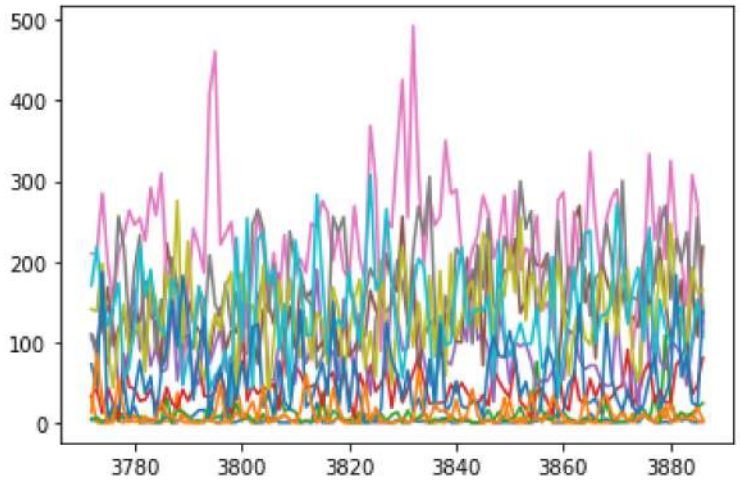
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
3772	4.9	31.8	3.0	32.7	109.6	106.0	210.0	109.2	140.8	170.1	72.5	12.3
3773	1.9	0.5	6.7	42.6	97.7	91.7	210.0	82.1	138.4	219.1	44.6	84.9
3774	0.3	0.0	1.1	11.6	125.1	129.7	284.4	155.7	197.1	154.2	186.6	24.1
3775	1.0	0.5	5.2	43.5	144.7	167.9	197.1	73.2	89.6	120.4	2.5	0.3
3776	1.7	7.9	14.2	23.6	118.6	95.9	148.4	140.6	43.1	142.8	22.4	0.3
...	...	...	...	...	...	...	...	...	...	...	...	...
3882	2.1	12.4	12.4	80.2	83.5	177.1	202.4	199.5	111.2	144.8	56.7	5.0
3883	4.6	5.5	8.1	99.0	45.6	81.8	144.7	236.5	100.6	62.8	82.6	6.2
3884	0.5	10.1	11.7	34.6	95.6	176.2	307.4	151.7	191.8	103.7	24.9	2.4
3885	0.4	2.4	17.7	46.7	130.5	106.8	271.6	254.6	161.6	152.9	20.2	18.7
3886	1.7	0.2	24.4	80.5	125.3	218.7	112.0	136.6	164.5	106.1	138.1	4.4

115 rows × 12 columns

In [255]:
```
plt.hist(a1)
plt.show()
```

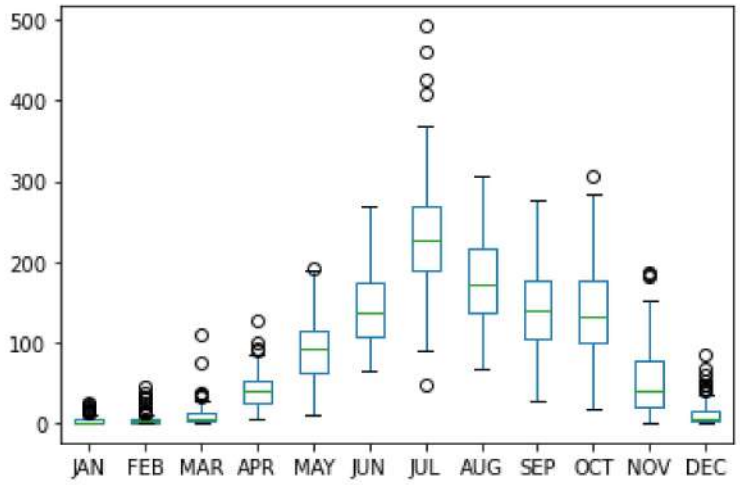


In [198]:
```
plt.plot(a1)
plt.show()
```



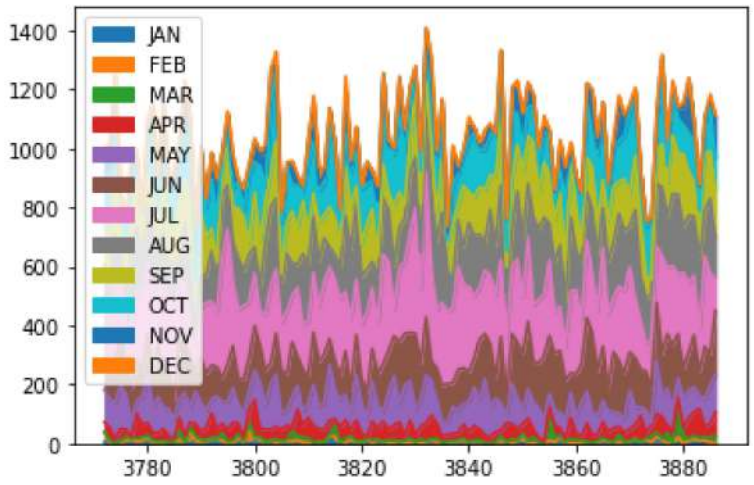
In [199]:
```
a1.plot.box()
```

Out[199]: <AxesSubplot:>



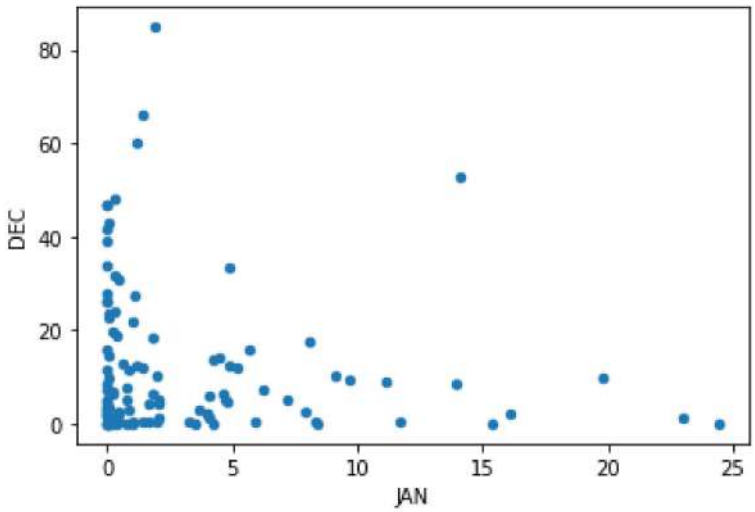
In [200]:
```
a1.plot.area()
```

Out[200]: <AxesSubplot:>



In [201]:
```
a1.plot.scatter('JAN','DEC')
```

Out[201]: <AxesSubplot:xlabel='JAN', ylabel='DEC'>



PUNJAB

In [202]:
```
a1=df[df['SUBDIVISION']=='PUNJAB']
a1
```

Out[202]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
1472	1472	PUNJAB	1901	55.7	50.1	25.2	2.1	25.2	10.4	178.2	145.0	24.4	3.7
1473	1473	PUNJAB	1902	0.0	0.8	9.9	10.9	29.6	49.9	125.6	94.9	67.2	9.0
1474	1474	PUNJAB	1903	29.5	0.5	45.0	1.3	9.2	5.2	212.2	119.1	132.5	6.9
1475	1475	PUNJAB	1904	24.2	1.7	87.8	1.2	13.8	22.0	59.9	124.0	73.8	7.4
1476	1476	PUNJAB	1905	53.0	40.3	24.3	0.5	2.2	19.2	122.6	50.3	111.1	1.2
...	...	...	...	...	...	...	...	...	...	...	...	...	...
1582	1582	PUNJAB	2011	3.5	35.6	8.2	17.8	18.9	162.9	120.9	193.5	140.2	0.0
1583	1583	PUNJAB	2012	62.6	3.2	1.9	31.1	1.6	11.9	120.2	135.1	112.3	2.2
1584	1584	PUNJAB	2013	9.3	50.1	11.6	3.4	3.6	120.3	117.9	217.1	24.4	16.2
1585	1585	PUNJAB	2014	21.8	20.1	30.3	24.5	20.8	20.6	76.3	41.9	105.8	6.0
1586	1586	PUNJAB	2015	17.7	31.3	68.5	29.8	16.7	48.3	130.2	88.6	69.2	9.0

115 rows × 20 columns

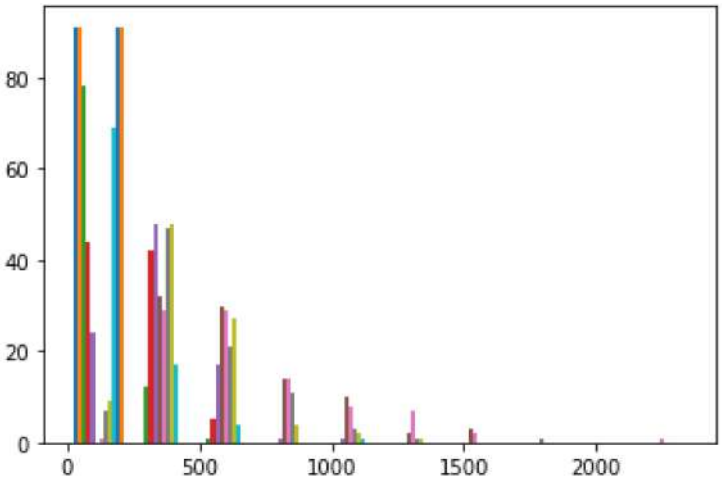
In [203]:
```
a1=a1.drop(['YEAR','SUBDIVISION','index','ANNUAL', 'Jan-Feb','Mar-May', 'Jun-S
a1
```

Out[203]:

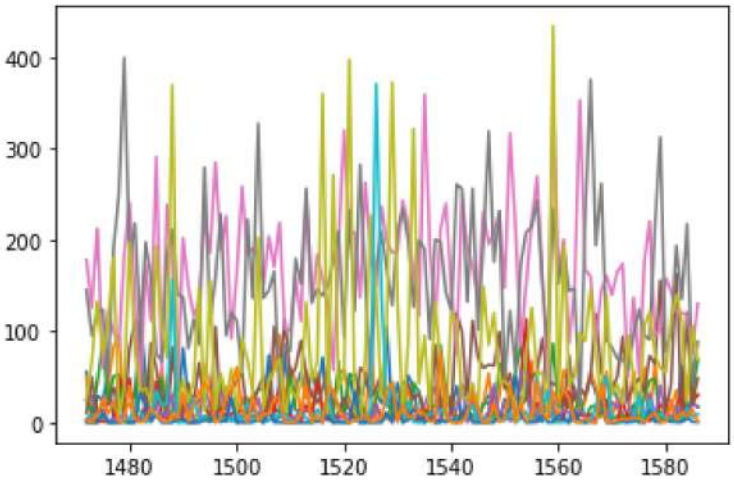
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1472	55.7	50.1	25.2	2.1	25.2	10.4	178.2	145.0	24.4	3.7	0.0	3.3
1473	0.0	0.8	9.9	10.9	29.6	49.9	125.6	94.9	67.2	9.0	0.0	0.1
1474	29.5	0.5	45.0	1.3	9.2	5.2	212.2	119.1	132.5	6.9	0.0	9.5
1475	24.2	1.7	87.8	1.2	13.8	22.0	59.9	124.0	73.8	7.4	9.8	25.9
1476	53.0	40.3	24.3	0.5	2.2	19.2	122.6	50.3	111.1	1.2	0.0	9.4
...	...	...	...	...	...	...	...	...	...	...	...	...
1582	3.5	35.6	8.2	17.8	18.9	162.9	120.9	193.5	140.2	0.0	1.0	2.6
1583	62.6	3.2	1.9	31.1	1.6	11.9	120.2	135.1	112.3	2.2	0.4	11.0
1584	9.3	50.1	11.6	3.4	3.6	120.3	117.9	217.1	24.4	16.2	6.1	6.6
1585	21.8	20.1	30.3	24.5	20.8	20.6	76.3	41.9	105.8	6.0	0.7	14.1
1586	17.7	31.3	68.5	29.8	16.7	48.3	130.2	88.6	69.2	9.0	0.8	0.7

115 rows × 12 columns

In [256]:
```
plt.hist(a1)
plt.show()
```

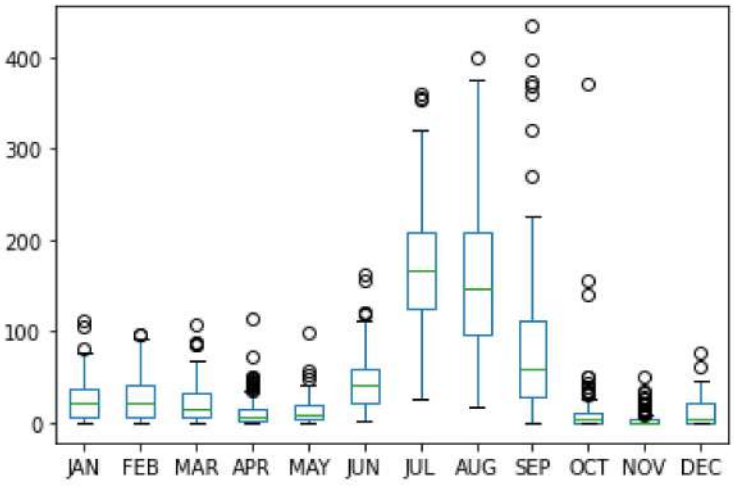


In [204]:
```
plt.plot(a1)
plt.show()
```



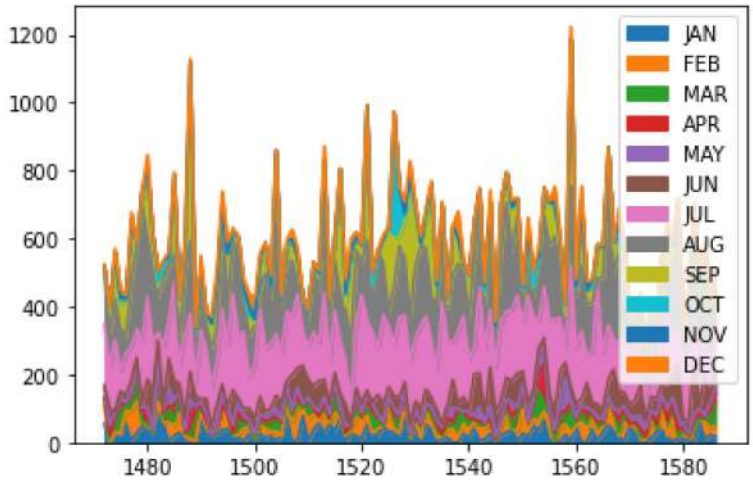
In [205]:
```
a1.plot.box()
```

Out[205]: <AxesSubplot:>



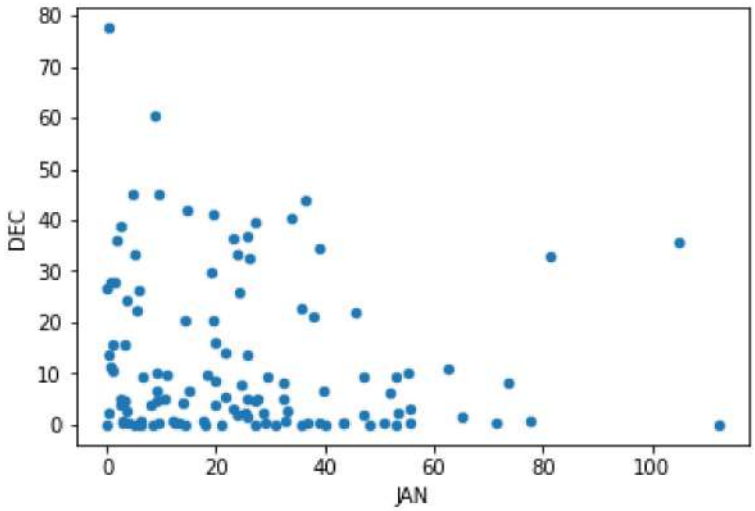
In [206]:
```
a1.plot.area()
```

Out[206]: <AxesSubplot:>



In [207]:
```
a1.plot.scatter('JAN','DEC')
```

Out[207]: <AxesSubplot:xlabel='JAN', ylabel='DEC'>



LAKSHADWEEP

In [208]:
```
a1=df[df['SUBDIVISION']=='LAKSHADWEEP']
a1
```

Out[208]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
4002	4002	LAKSHADWEEP	1901	22.6	86.4	114.8	263.8	37.3	459.0	0.0	0.0	46.7
4003	4003	LAKSHADWEEP	1902	99.3	9.6	32.6	40.4	179.1	374.2	413.3	170.0	214.3
4005	4005	LAKSHADWEEP	1904	0.0	0.0	13.5	13.2	143.3	261.3	256.0	38.9	219.9
4006	4006	LAKSHADWEEP	1905	62.4	0.0	0.0	0.0	166.7	400.7	68.7	377.5	107.5
4007	4007	LAKSHADWEEP	1906	17.8	0.0	24.4	33.8	213.0	465.0	348.6	260.5	25.9
...	...	...	...	...	...	...	...	...	...	...	...	...
4111	4111	LAKSHADWEEP	2011	5.1	2.8	3.1	85.9	107.2	153.6	350.2	254.0	255.2
4112	4112	LAKSHADWEEP	2012	19.2	0.1	1.6	76.8	21.2	327.0	231.5	381.2	179.8
4113	4113	LAKSHADWEEP	2013	26.2	34.4	37.5	5.3	88.3	426.2	296.4	154.4	180.0
4114	4114	LAKSHADWEEP	2014	53.2	16.1	4.4	14.9	57.4	244.1	116.1	466.1	132.2
4115	4115	LAKSHADWEEP	2015	2.2	0.5	3.7	87.1	133.1	296.6	257.5	146.4	160.4

103 rows × 20 columns

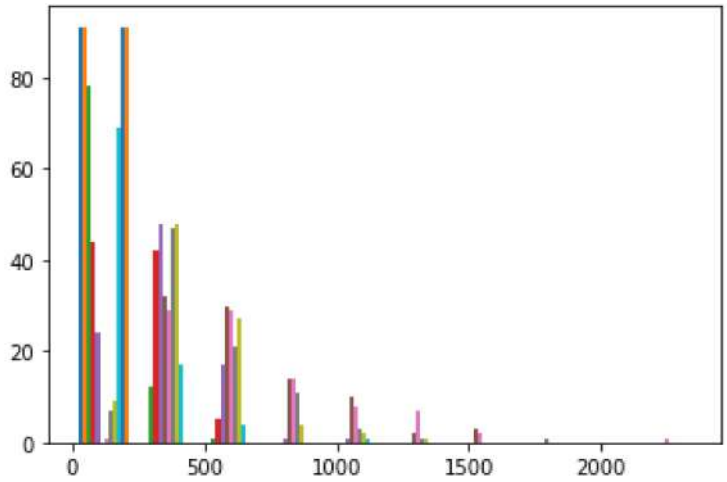
In [209]:
```
a1=a1.drop(['YEAR','SUBDIVISION','index','ANNUAL', 'Jan-Feb','Mar-May', 'Jun-S
a1
```

Out[209]:

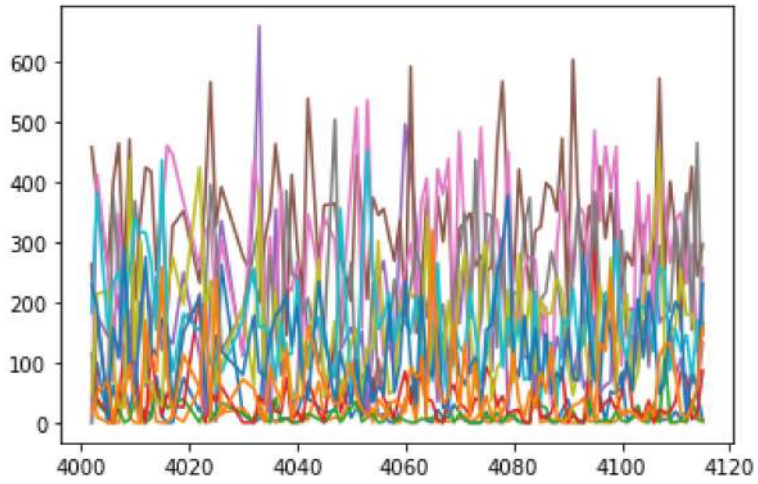
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
4002	22.6	86.4	114.8	263.8	37.3	459.0	0.0	0.0	46.7	183.7	229.9	15.0
4003	99.3	9.6	32.6	40.4	179.1	374.2	413.3	170.0	214.3	384.2	192.8	49.0
4005	0.0	0.0	13.5	13.2	143.3	261.3	256.0	38.9	219.9	153.6	8.3	68.9
4006	62.4	0.0	0.0	0.0	166.7	400.7	68.7	377.5	107.5	232.1	159.3	0.0
4007	17.8	0.0	24.4	33.8	213.0	465.0	348.6	260.5	25.9	252.3	106.5	63.8
...	...	...	...	...	...	...	...	...	...	...	...	...
4111	5.1	2.8	3.1	85.9	107.2	153.6	350.2	254.0	255.2	117.4	184.3	14.9
4112	19.2	0.1	1.6	76.8	21.2	327.0	231.5	381.2	179.8	145.9	12.4	8.8
4113	26.2	34.4	37.5	5.3	88.3	426.2	296.4	154.4	180.0	72.8	78.1	26.7
4114	53.2	16.1	4.4	14.9	57.4	244.1	116.1	466.1	132.2	169.2	59.0	62.3
4115	2.2	0.5	3.7	87.1	133.1	296.6	257.5	146.4	160.4	165.4	231.0	159.0

103 rows × 12 columns

In [257]:
```
plt.hist(a1)
plt.show()
```

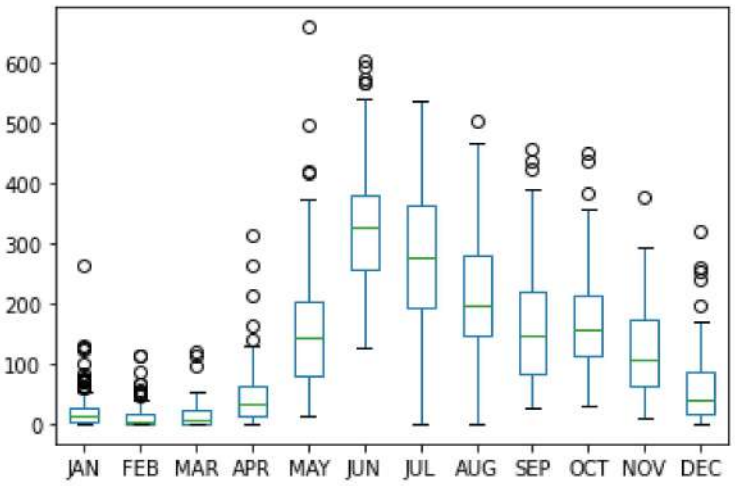


In [210]:
```
plt.plot(a1)
plt.show()
```



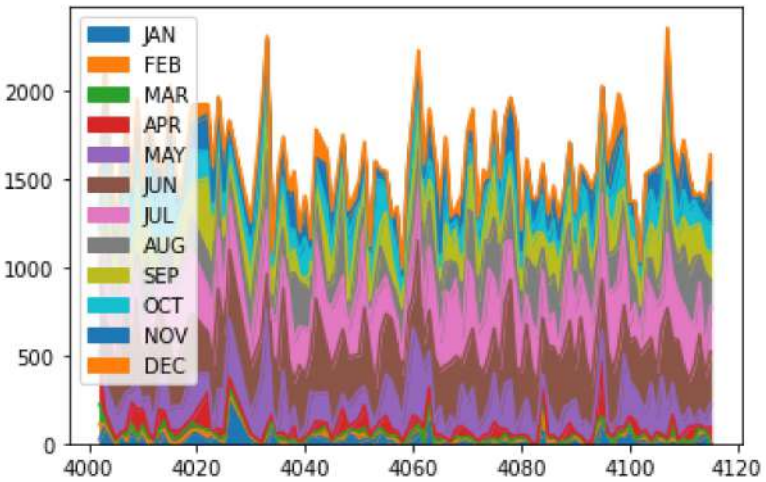
In [211]:
```
a1.plot.box()
```

Out[211]: <AxesSubplot:>



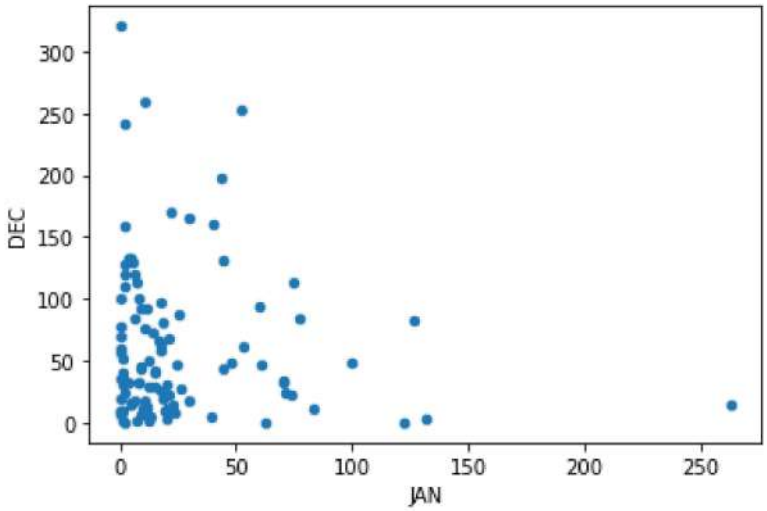
In [212]:
```
a1.plot.area()
```

Out[212]: <AxesSubplot:>



In [213]:
```
a1.plot.scatter('JAN','DEC')
```

Out[213]:
```
<AxesSubplot:xlabel='JAN', ylabel='DEC'>
```



ANDAMAN & NICOBAR ISLANDS

In [214]:
```
a1=df[df['SUBDIVISION']=='ANDAMAN & NICOBAR ISLANDS']
a1
```

Out[214]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
0	0	ANDAMAN & NICOBAR ISLANDS	1901	49.2	87.1	29.2	2.3	528.8	517.5	365.1	481.1	332.6	3
1	1	ANDAMAN & NICOBAR ISLANDS	1902	0.0	159.8	12.2	0.0	446.1	537.1	228.9	753.7	666.2	1
2	2	ANDAMAN & NICOBAR ISLANDS	1903	12.7	144.0	0.0	1.0	235.1	479.9	728.4	326.7	339.0	1
3	3	ANDAMAN & NICOBAR ISLANDS	1904	9.4	14.7	0.0	202.4	304.5	495.1	502.0	160.1	820.4	2
4	4	ANDAMAN & NICOBAR ISLANDS	1905	1.3	0.0	3.3	26.9	279.5	628.7	368.7	330.5	297.0	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...
105	105	ANDAMAN & NICOBAR ISLANDS	2011	265.9	84.8	272.8	111.4	326.5	383.2	583.2	441.5	757.1	2
106	106	ANDAMAN & NICOBAR ISLANDS	2012	119.9	45.6	30.9	55.8	533.9	458.2	317.3	369.6	868.9	2
107	107	ANDAMAN & NICOBAR ISLANDS	2013	67.1	37.6	43.0	46.3	509.3	777.0	564.8	336.7	473.6	4
108	108	ANDAMAN & NICOBAR ISLANDS	2014	41.9	8.6	0.0	11.1	238.0	416.6	467.6	321.6	412.9	4
109	109	ANDAMAN & NICOBAR ISLANDS	2015	126.8	7.6	3.1	138.2	331.9	346.4	328.9	480.0	523.3	2

104 rows × 20 columns

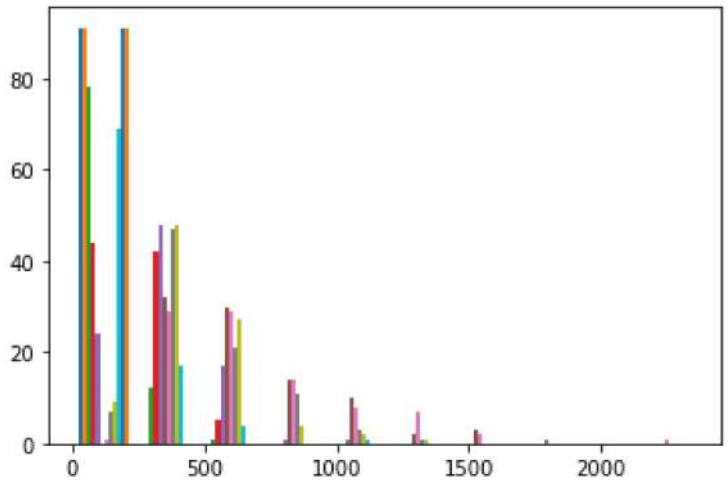
In [215]:
```
a1=a1.drop(['YEAR','SUBDIVISION','index','ANNUAL', 'Jan-Feb','Mar-May', 'Jun-S
a1
```

Out[215]:

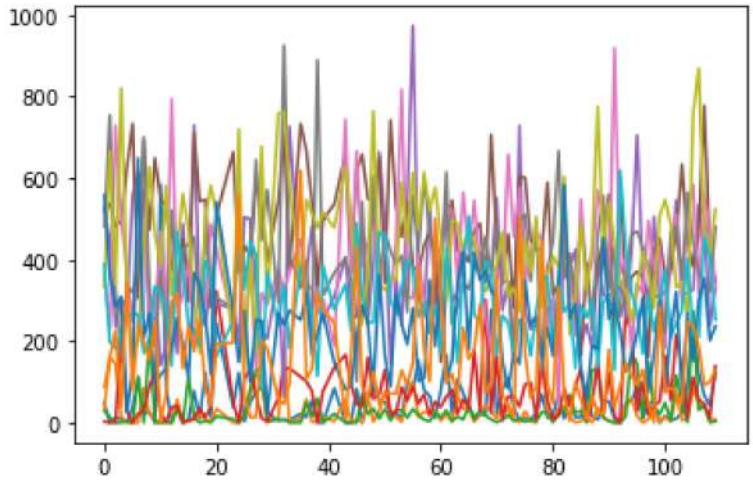
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	49.2	87.1	29.2	2.3	528.8	517.5	365.1	481.1	332.6	388.5	558.2	33.6
1	0.0	159.8	12.2	0.0	446.1	537.1	228.9	753.7	666.2	197.2	359.0	160.5
2	12.7	144.0	0.0	1.0	235.1	479.9	728.4	326.7	339.0	181.2	284.4	225.0
3	9.4	14.7	0.0	202.4	304.5	495.1	502.0	160.1	820.4	222.2	308.7	40.1
4	1.3	0.0	3.3	26.9	279.5	628.7	368.7	330.5	297.0	260.7	25.4	344.7
...	...	...	...	...	...	...	...	...	...	...	...	...
105	265.9	84.8	272.8	111.4	326.5	383.2	583.2	441.5	757.1	212.3	150.8	238.5
106	119.9	45.6	30.9	55.8	533.9	458.2	317.3	369.6	868.9	209.7	300.5	187.3
107	67.1	37.6	43.0	46.3	509.3	777.0	564.8	336.7	473.6	455.8	354.2	92.3
108	41.9	8.6	0.0	11.1	238.0	416.6	467.6	321.6	412.9	402.6	201.2	100.4
109	126.8	7.6	3.1	138.2	331.9	346.4	328.9	480.0	523.3	252.1	236.3	129.9

104 rows × 12 columns

In [258]:
```
plt.hist(a1)
plt.show()
```

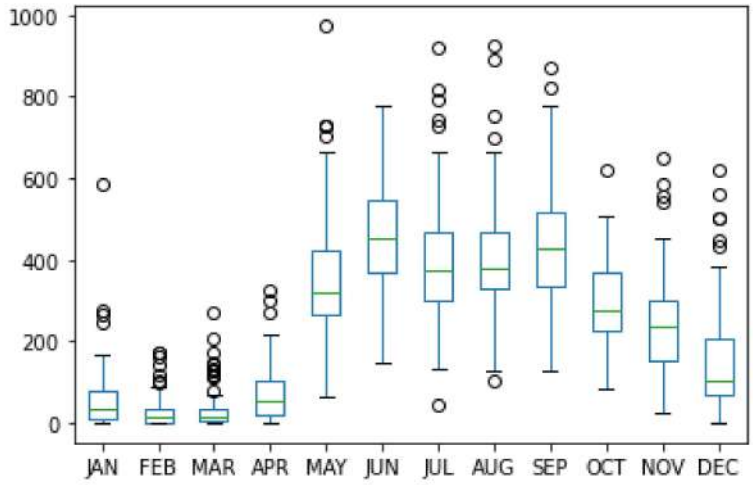


In [216]:
```
plt.plot(a1)
plt.show()
```



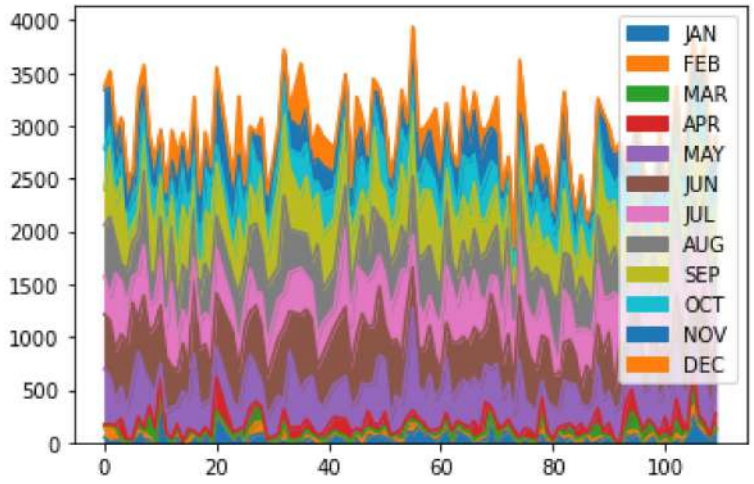
In [217]:
```
a1.plot.box()
```

Out[217]: <AxesSubplot:>



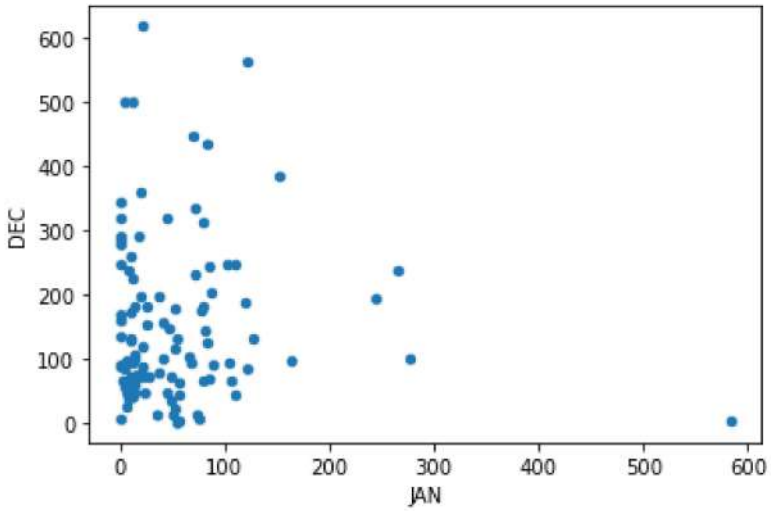
In [218]:
```
a1.plot.area()
```

Out[218]: <AxesSubplot:>



In [219]:
```
a1.plot.scatter('JAN','DEC')
```

Out[219]: <AxesSubplot:xlabel='JAN', ylabel='DEC'>



ARUNACHAL PRADESH

In [220]:
```
a1=df[df['SUBDIVISION']=='ARUNACHAL PRADESH']
a1
```

Out[220]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
112	112	ARUNACHAL PRADESH	1918	10.4	11.0	191.2	144.6	861.1	1609.9	1303.0	692.6	515.8
113	113	ARUNACHAL PRADESH	1919	34.5	67.8	28.5	256.9	420.6	973.6	999.0	286.7	628.7
114	114	ARUNACHAL PRADESH	1920	14.0	196.3	605.6	364.7	173.6	840.6	535.4	896.5	376.7
115	115	ARUNACHAL PRADESH	1921	78.9	54.3	180.3	358.0	598.0	1233.2	1433.0	885.9	603.4
116	116	ARUNACHAL PRADESH	1922	50.7	59.4	170.4	299.5	350.5	1109.3	918.7	488.3	207.6
...	...	...	...	...	...	...	...	...	...	...	...	...
202	202	ARUNACHAL PRADESH	2011	40.0	51.3	174.5	240.8	219.6	288.4	531.4	277.6	286.7
203	203	ARUNACHAL PRADESH	2012	57.8	35.8	134.2	403.4	187.4	645.8	638.9	316.0	724.9
204	204	ARUNACHAL PRADESH	2013	18.5	40.5	115.1	175.1	335.8	290.0	329.6	230.2	316.1
205	205	ARUNACHAL PRADESH	2014	19.0	101.9	80.3	86.7	299.0	415.8	392.4	599.6	343.0
206	206	ARUNACHAL PRADESH	2015	30.8	47.5	97.5	287.1	238.9	637.9	329.3	595.5	374.2

91 rows × 20 columns

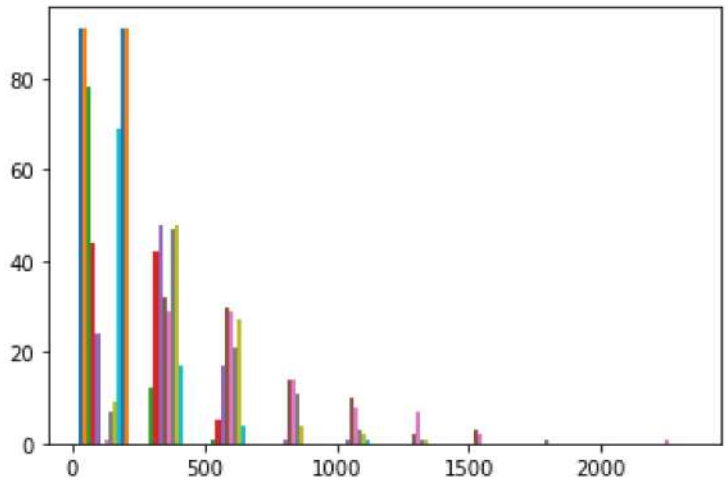
In [221]:
```
a1=a1.drop(['YEAR','SUBDIVISION','index','ANNUAL', 'Jan-Feb','Mar-May', 'Jun-S
a1
```

Out[221]:

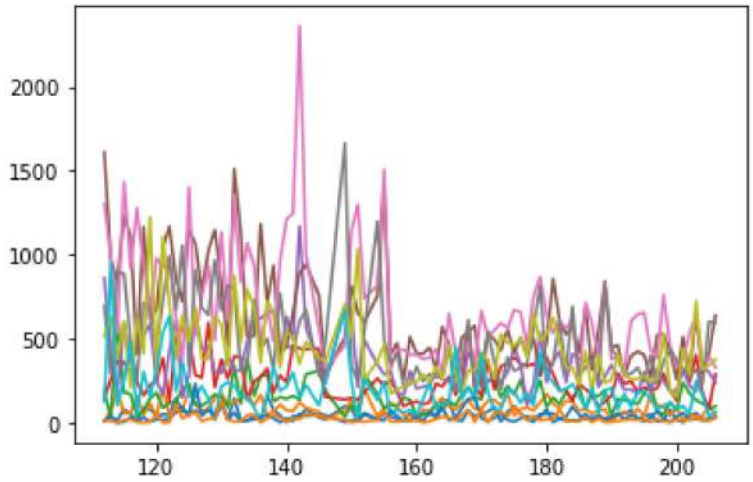
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
112	10.4	11.0	191.2	144.6	861.1	1609.9	1303.0	692.6	515.8	125.2	7.8	13.7
113	34.5	67.8	28.5	256.9	420.6	973.6	999.0	286.7	628.7	948.3	40.7	8.6
114	14.0	196.3	605.6	364.7	173.6	840.6	535.4	896.5	376.7	103.3	0.0	0.0
115	78.9	54.3	180.3	358.0	598.0	1233.2	1433.0	885.9	603.4	246.3	4.6	15.5
116	50.7	59.4	170.4	299.5	350.5	1109.3	918.7	488.3	207.6	483.5	30.3	19.0
...	...	...	...	...	...	...	...	...	...	...	...	...
202	40.0	51.3	174.5	240.8	219.6	288.4	531.4	277.6	286.7	51.9	16.2	15.2
203	57.8	35.8	134.2	403.4	187.4	645.8	638.9	316.0	724.9	248.1	22.0	26.2
204	18.5	40.5	115.1	175.1	335.8	290.0	329.6	230.2	316.1	164.1	13.3	14.6
205	19.0	101.9	80.3	86.7	299.0	415.8	392.4	599.6	343.0	35.1	20.1	10.2
206	30.8	47.5	97.5	287.1	238.9	637.9	329.3	595.5	374.2	65.2	33.8	29.8

91 rows × 12 columns

In [259]:
```
plt.hist(a1)
plt.show()
```

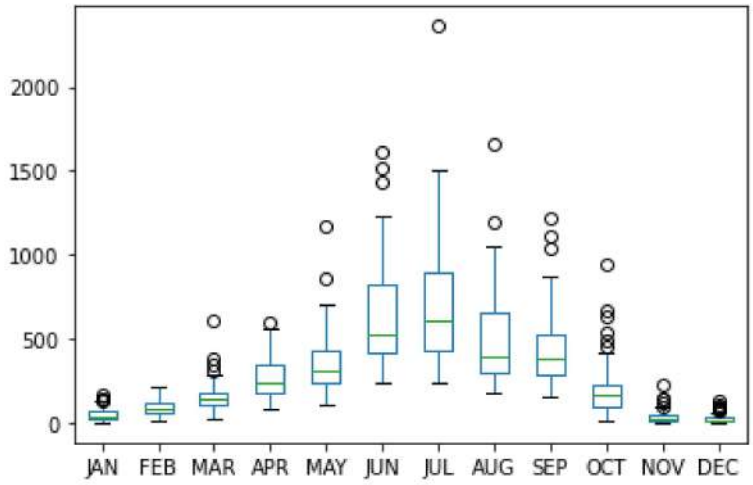


In [222]:
```
plt.plot(a1)
plt.show()
```



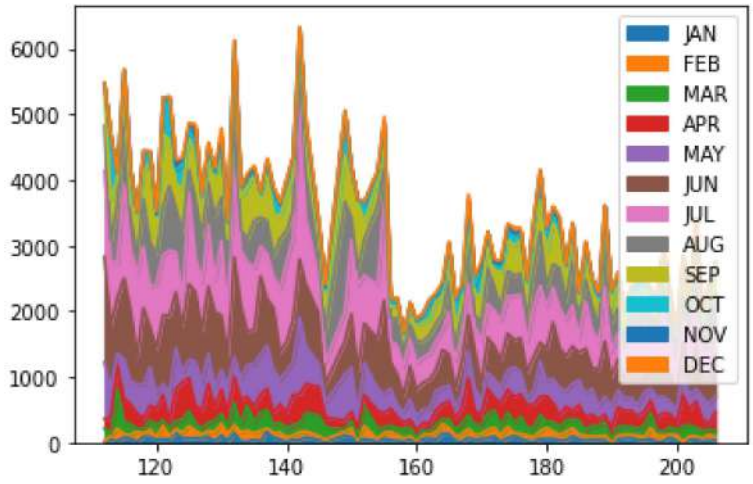
In [223]:
```
a1.plot.box()
```

Out[223]: <AxesSubplot:>



In [224]:
```
a1.plot.area()
```

Out[224]: <AxesSubplot:>



In [225]:
```
a1.plot.scatter('JAN','DEC')
```

Out[225]: <AxesSubplot:xlabel='JAN', ylabel='DEC'>