Ruby master - Bug #12297
Ruby stdlib date can parse non-existent date with year 0
04/18/2016 12:54 PM - globi (t b)

<table>
<thead>
<tr>
<th>Status:</th>
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<tbody>
<tr>
<td>Priority:</td>
<td>Normal</td>
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<tr>
<td>Assignee:</td>
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<td>Target version:</td>
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<td>Backport:</td>
<td>2.1: UNKNOWN, 2.2: UNKNOWN, 2.3: UNKNOWN</td>
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**Description**

Ruby date lib can parse date with year 0

```ruby
$ pry [1] pry(main)> shitdate=Date.strptime('0000-01-07','%Y-%m-%d') => #<Date: 0000-01-07 ((1721064j,0s,0n),+0s,2299161j)> [2]
pry(main)> shitdate.year => 0 [3] pry(main)>
```

There is no year 0 in gregorian and julian calendar between 1 BC and 1 AD
It should raise ArgumentError like it do when month/day number is 0.

**History**

1 - 06/03/2016 05:01 PM - noahgibbs (Noah Gibbs)
- File no_year_0.patch added

Ruby has a lot of different time-parsing and date-parsing code. But for Date's strptime specifically, this is an easy fix. Patch is attached.

2 - 06/06/2016 10:48 PM - noahgibbs (Noah Gibbs)

Ah! It would be hard to "fix" Ruby's stdlib to not allow dates to have a 0 year in general, because of code like the Date test that can use a Date as a delta. That is:

```ruby
class DateSub < Date; end

d2 = d - 1
assert_instance_of(DateSub, d2)
```

Things like DateSub can clearly have a 0 year, because that implies that the difference in years is 0, not that it's the year 0.

I think it still makes sense to fix strptime with the fix above. But I don't think Date or DateTime should disallow the year 0 in general.

3 - 07/19/2016 07:37 AM - matz (Yukihiro Matsumoto)

According to [ruby-dev:10241](Japanese), it's intentional.
In Gregorian calendar, the year 0 does not exist, but in astronomical year numbering, the year 0 does exist.

https://en.wikipedia.org/wiki/0_(year)

Matz.

4 - 06/26/2019 06:08 PM - jeremyevans0 (Jeremy Evans)
- Status changed from Open to Rejected

**Files**

<table>
<thead>
<tr>
<th>File</th>
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<tr>
<td>no_year_0.patch</td>
<td>1.62 KB</td>
<td>06/03/2016</td>
<td>noahgibbs (Noah Gibbs)</td>
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