Including a module in a superclass after it has been included in a subclass leads to infinite recursion if the module uses `super`

08/27/2011 08:39 AM - myronmarston (Myron Marston)

<table>
<thead>
<tr>
<th>Status:</th>
<th>Closed</th>
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<tbody>
<tr>
<td>Priority:</td>
<td>Normal</td>
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<tr>
<td>Assignee:</td>
<td>nobu (Nobuyoshi Nakada)</td>
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<td>Target version:</td>
<td>2.0.0</td>
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<td>ruby -v:</td>
<td>1.9.x</td>
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<td>Backport:</td>
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Description

Under these particular circumstances, you get infinite recursion and a system stack error on 1.9 but not 1.8:

- Create a module that has a method that uses super
- Include that module in a class after it has already been included in one of its subclasses
- Instantiate an object of said subclass and call the method

On 1.8, the super works as expected. On 1.9 you get a SystemStackError. Here's example code that demonstrates the issue:

```
example.rb

module MyModule
  def some_method; super; end
end

class MyBaseClass; end

class MySubClass < MyBaseClass;
  include MyModule
end

To trigger this bug, we must include the module in the base class after the module has already been included in the subclass. If we move this line above the subclass declaration, this bug will not occur.

```
MyBaseClass.send(:include, MyModule)

MySubClass.new.some_method
```

The output

```
➜ ruby --version
ruby 1.8.7 (2011-02-18 patchlevel 334) [i686-darwin10.6.0]
➜ ruby example.rb
example.rb:2:in some_method': super: no superclass method some_method' for #<MySubClass:0x1001bc2d0> (NoMethodError)
  from example.rb:2:in "some_method"
  from example.rb:13

➜ ruby --version
ruby 1.9.2p180 (2011-02-18 revision 30909) [x86_64-darwin10.6.0]
➜ ruby example.rb
example.rb:2: stack level too deep (SystemStackError)
```

I've tried it on 1.9.3.preview-1 and I get the SystemStackError there, too. I would expect 1.9 to act like 1.8 here, and not infinitely recurse on itself.
Related issues:
Related to Ruby master - Bug #3351: stack overflow on super
Closed
Related to Ruby master - Feature #1586: Including a module already present in...
Rejected

History
#1 - 10/31/2011 09:31 AM - pda (Paul Annesley)
This bug causes a lot of trouble for RSpec developers and end users alike:
https://github.com/rspec/rspec-rails/issues/371#issuecomment-1430232
It'd be great to see it fixed on Ruby's side.
Cheers!
Paul

#2 - 03/11/2012 03:24 PM - ko1 (Koichi Sasada)
- Assignee set to ko1 (Koichi Sasada)
- Target version set to 2.0.0

#3 - 03/18/2012 06:46 PM - shyouhei (Shyouhei Urabe)
- Status changed from Open to Assigned

#4 - 11/26/2012 09:23 AM - ko1 (Koichi Sasada)
- Assignee changed from ko1 (Koichi Sasada) to nobu (Nobuyoshi Nakada)
nobu, could you check it?

#5 - 01/23/2013 04:45 PM - nobu (Nobuyoshi Nakada)
- Status changed from Assigned to Closed
Already fixed probably at r36595 etc.