

## Ruby master - Bug #10431

### Can't sweep garbage object immediatly when GC\_ENABLE\_LAZY\_SWEEP=0

10/27/2014 02:50 AM - imasahiro (Masahiro Ide)

<b>Status:</b> Closed	
<b>Priority:</b> Normal	
<b>Assignee:</b>	
<b>Target version:</b> 2.2.0	
<b>ruby -v:</b> ruby 2.2.0dev (2014-10-26 trunk 48073) [x86_64-darwin14]	<b>Backport:</b> 2.0.0: DONTNEED, 2.1: DONTNEED

#### Description

```
GC_ENABLE_LAZY_SWEEP=0 ruby
GC
```

```
$ ./configure CFLAGS="-DGC_ENABLE_LAZY_SWEEP=0" && make miniruby
$ cat bug2.rb
GC.disable
10000.times { Object.new }
total_freed_objects1 = GC.stat[:total_freed_objects]
GC.enable
GC.start(full_mark: true, immediate_sweep: true)
total_freed_objects2 = GC.stat[:total_freed_objects]
puts "freed object : #{total_freed_objects2 - total_freed_objects1}"
```

```
$ ./miniruby -v
ruby 2.2.0dev (2014-10-26 trunk 48073) [x86_64-darwin14]
$ ./miniruby bug2.rb
freed object : 0
```

```
ruby GC_ENABLE_LAZY_SWEEP=0,
RGENGC_CHECK_MODE=1
assert
```

```
$ ./miniruby -e '10000.times { Object.new }'
Assertion failed: (objspace->flags.stat == gc_stat_none), function gc_start, file ../gc.c, line 58
02.
[1] 91336 abort ./miniruby -e '10000.times { Object.new }'
```

```
sweep GC_ENABLE_LAZY_SWEEP!=1 sweep
```

```
diff --git a/gc.c b/gc.c
index a27cc01..979e2e0 100644
--- a/gc.c
+++ b/gc.c
@@ -3314,9 +3314,8 @@ static void
gc_sweep_rest(rb_objspace_t *objspace)
{
    rb_heap_t *heap = heap_eden; /* lazy sweep only for eden */
-
-   if (is_lazy_sweeping(heap)) {
-       while (is_lazy_sweeping(heap)) {
+   if ((heap->sweep_pages != NULL) {
+       while ((heap->sweep_pages != NULL) {
            gc_sweep_step(objspace, heap);
        }
    }
}
```

#### English:

When I tried to compile ruby with GC\_ENABLE\_LAZY\_SWEEP=0, Ruby does not sweep objects immediatly.

```

$ ./configure CFLAGS="-DGC_ENABLE_LAZY_SWEEP=0" && make miniruby
$ cat bug2.rb
GC.disable
10000.times { Object.new }
total_freed_objects1 = GC.stat[:total_freed_objects]
GC.enable
GC.start(full_mark: true, immediate_sweep: true)
total_freed_objects2 = GC.stat[:total_freed_objects]
puts "freed object : #{total_freed_objects2 - total_freed_objects1}"

$ ./miniruby -v
ruby 2.2.0dev (2014-10-26 trunk 48073) [x86_64-darwin14]
$ ./miniruby bug2.rb
freed object : 0

```

In addition, when I set GC\_ENABLE\_LAZY\_SWEEP=0 and RGENGC\_CHECK\_MODE=1 ruby gives me assertion error like this:

```

$ ./miniruby -e '10000.times { Object.new }'
Assertion failed: (objspace->flags.stat == gc_stat_none), function gc_start, file ../gc.c, line 58
02.
[1] 91336 abort ./miniruby -e '10000.times { Object.new }'

```

The following patch fix this problem.

```

diff --git a/gc.c b/gc.c
index a27cc01..979e2e0 100644
--- a/gc.c
+++ b/gc.c
@@ -3314,9 +3314,8 @@ static void
gc_sweep_rest(rb_objspace_t *objspace)
{
    rb_heap_t *heap = heap_eden; /* lazy sweep only for eden */
-
-    if (is_lazy_sweeping(heap)) {
-        while (is_lazy_sweeping(heap)) {
+    if ((heap->sweep_pages != NULL) {
+        while ((heap->sweep_pages != NULL) {
            gc_sweep_step(objspace, heap);
        }
    }
}

```

## Associated revisions

### Revision 202b4bbe - 10/27/2014 04:40 AM - nobu (Nobuyoshi Nakada)

gc.c: fix no lazy sweep mode

- gc.c (gc\_sweep\_rest): sweep rest pages regardless of whether lazy sweep is enabled or not. based on the patch by Masahiro Ide at [ruby-dev:48706]. [Bug #10431]

git-svn-id: svn+ssh://ci.ruby-lang.org/ruby/trunk@48150 b2dd03c8-39d4-4d8f-98ff-823fe69b080e

### Revision 48150 - 10/27/2014 04:40 AM - nobu (Nobuyoshi Nakada)

gc.c: fix no lazy sweep mode

- gc.c (gc\_sweep\_rest): sweep rest pages regardless of whether lazy sweep is enabled or not. based on the patch by Masahiro Ide at [ruby-dev:48706]. [Bug #10431]

### Revision 48150 - 10/27/2014 04:40 AM - nobu (Nobuyoshi Nakada)

gc.c: fix no lazy sweep mode

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**History**

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**#1 - 10/27/2014 04:17 AM - nobu (Nobuyoshi Nakada)**

- Description updated

r41510 is\_lazy\_sweeping() r47444 is\_lazy\_sweeping()

**#2 - 10/27/2014 04:18 AM - nobu (Nobuyoshi Nakada)**

- Backport changed from 2.0.0: UNKNOWN, 2.1: UNKNOWN to 2.0.0: DONTNEED, 2.1: DONTNEED

**#3 - 10/27/2014 04:40 AM - nobu (Nobuyoshi Nakada)**

- Status changed from Open to Closed

- % Done changed from 0 to 100

Applied in changeset r48150.

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gc.c: fix no lazy sweep mode

- gc.c (gc\_sweep\_rest): sweep rest pages regardless of whether lazy sweep is enabled or not. based on the patch by Masahiro Ide at [ruby-dev:48706]. [Bug #10431]