Using Image_and_cursor, A Simple Java Applet: bryce.html

x: 211

y: 143

red: 0.612

green: 0.353

blue: 0.192
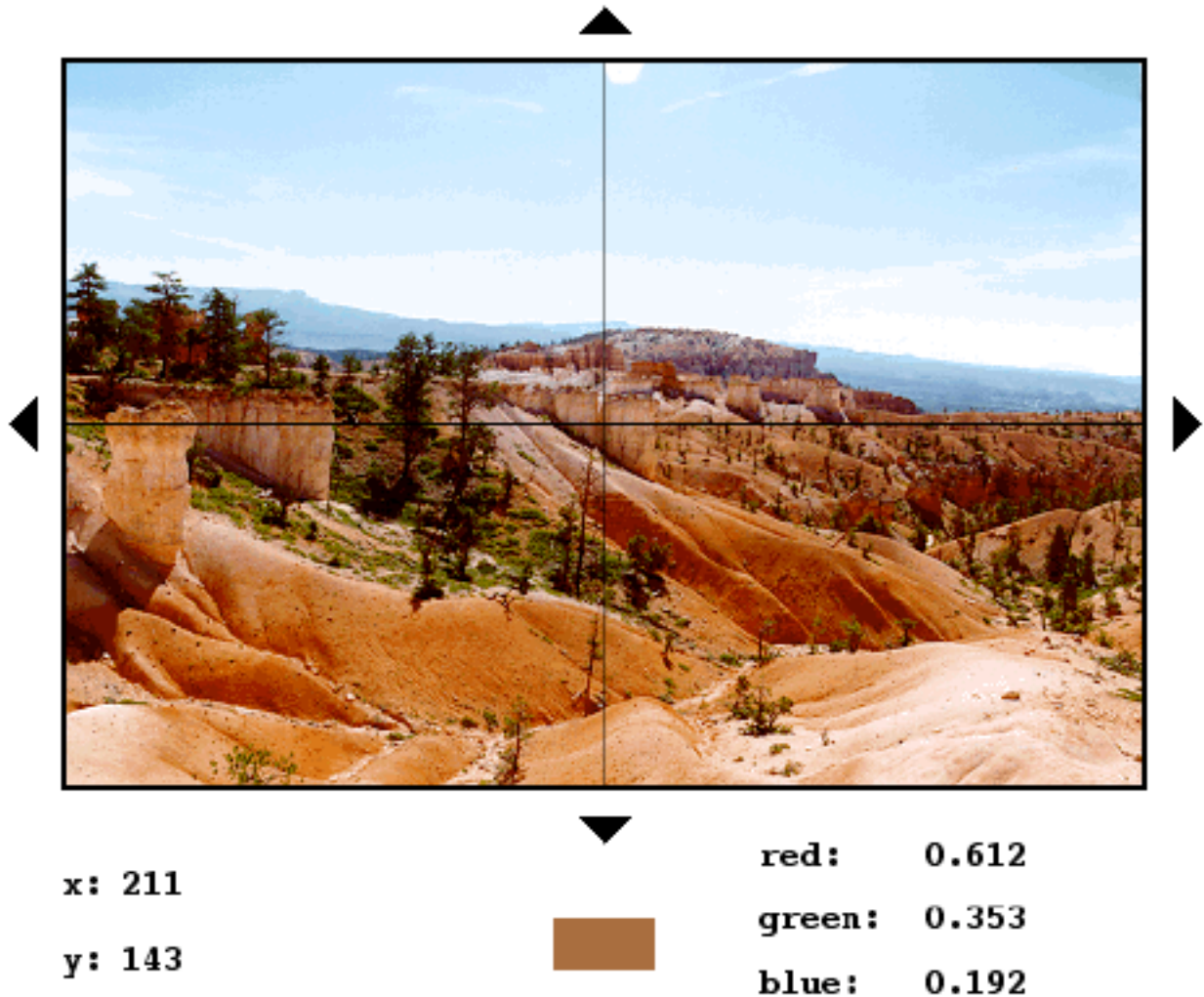
The image above is very much like any image in an html page with one big exception -- it would be a live image in a real html page. If you were reading this in a browser as part of the page **bryce.html** you would be able to move the crosshairs in either of two ways. You could move them by clicking on the image at the point to which you want to move them or you could click on any of the four arrows to move the crosshairs one pixel in the direction indicated by the arrow. As you moved the crosshairs the display below the picture would change. At the lower left the display would indicate the position of the crosshairs. In the lower center a rectangular color patch would show the color of the pixel indicated by the crosshairs. At the lower right three numbers between zero and one would indicate the RGB (red, green, blue) representation of this color.

The procedure for including a live image like this is only slightly more complicated than the procedure for including an image. You will need the following.

- An image.
- You need to know the width and height of the image in pixels.
- The file Image_and_cursor.class

These two files should be in the same directory or folder as the html file. The code including the live picture in the example above is

```
<applet code="Image_and_cursor.class"
     width  =  502          height =  405>
     <param name = "backdrop_file" value = "bryce.gif">

     <param name = "cursor_red" value = "0">
     <param name = "cursor_green" value = "0">
     <param name = "cursor_blue" value = "0">
     <param name = "cursor_x" value = "211">
     <param name = "cursor_y" value = "142">

     <param name = "controls_red" value = "0">
     <param name = "controls_green" value = "0">
     <param name = "controls_blue" value = "0">

     <param name = "back_red" value = "255">
     <param name = "back_green" value = "255">
     <param name = "back_blue" value = "255">

     <param name = "image_width" value = "422">
     <param name = "image_height" value = "285">
     <param name = "font_size" value = "14">

     <param name = "color_sw" value = "2">
 </applet>
```

This code looks more complicated than it is because the **Image_and_cursor** applet is designed to provide considerable flexibility. In many cases the only lines you need to change are the four lines in boldface. The first of these lines specifies the width and height of the space used by this applet in your html document. The width is 80 pixels greater than the width of the image you want use under the crosshairs. The height is 120 pixels greater than the height of this image. You will also need to change the name of the file containing this image.   Finally, you need to change the **image_width** and **image_height** parameters toward the bottom of the code above. These two parameters specify the width and height in pixels of the image you want to use under the crosshairs. For example, if you wanted to use an image in a file called **myimage.gif** whose width was 300 pixels and whose height was 200 pixels, the four bold-faced lines above would be changed to

```
   width  =  380          height =  320>
     <param name = "backdrop_file" value = "myimage.gif">
     <param name = "image_width" value = "300">
     <param name = "image_height" value = "200">
```

We recommend that you make a copy of the file **bryce.html** and name it **myimage.html**. Choose an image of your own and change **myimage.html** to display the image you've chosen rather than **bryce.gif**. This is all you may ever need to know about using the **Image_and_cursor** applet. Read on for its additional features.

Additional Features:

- You can change the color of the crosshairs by changing the three lines below.

```
<param name = "cursor_red" value = "0">
<param name = "cursor_green" value = "0">
<param name = "cursor_blue" value = "0">
```

These three lines specify the red, green, and blue components of the color used for the crosshairs. The values of the three parameters must be integers between zero and 255.

- You can change the initial position of the crosshairs by changing the two lines below in the obvious way.

```
<param name = "cursor_x" value = "211">
<param name = "cursor_y" value = "142">
```

- You can change the color of the four arrows at the top, bottom, right, and left of the image by changing the lines below in the obvious way.

```
<param name = "controls_red" value = "0">
<param name = "controls_green" value = "0">
<param name = "controls_blue" value = "0">
```

- The next three lines enable you to change the background color for the area occupied by the applet.

```
<param name = "back_red" value = "255">
<param name = "back_green" value = "255">
<param name = "back_blue" value = "255">
```

- The line below enables you to change the size of the font used in the display.

```
<param name = "font_size" value = "14">
```

- The line below provides control over the information displayed under the image.

```
<param name = "color_sw" value = "2">
```

- There are three possible values for the parameter **color_sw**

◇ 0 Displays only the position of the crosshairs.
◇ 1 Displays the red, green, and blue color values of the indicated pixel as integers between 0 and 255.
◇ 2 Displays the red, green, and blue color values of the indicated pixel as real numbers between 0 and 1.