2010

Bioluminescence

Zachary Pfeifer

Louisiana State University and Agricultural and Mechanical College

Follow this and additional works at: https://digitalcommons.lsu.edu/gradschool_theses

Part of the Music Commons

Recommended Citation

https://digitalcommons.lsu.edu/gradschool_theses/2293

This Thesis is brought to you for free and open access by the Graduate School at LSU Digital Commons. It has been accepted for inclusion in LSU Master's Theses by an authorized graduate school editor of LSU Digital Commons. For more information, please contact gradetd@lsu.edu.
Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Master of Music

In

The Department of Music

By
Zachary Pfeifer
B.A. Kutztown University of Pennsylvania, 2006
May 2010
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSTRACT</td>
<td>iii</td>
</tr>
<tr>
<td>INSTRUMENTATION</td>
<td>1</td>
</tr>
<tr>
<td>BIOLUMINESCENCE</td>
<td>2</td>
</tr>
<tr>
<td>VITA</td>
<td>89</td>
</tr>
</tbody>
</table>
ABSTRACT

The ability of certain animals to create natural light is called bioluminescence. This ability is found throughout the world in various biomes but is most common in the deep ocean, in layers of dark water that remain untouched by the sun’s rays.

One way Bioluminescence attempts to convey light moving through the depths is by assigning bright passages to instruments that are easily heard over light accompanying textures or are sometimes featured in solos or duets. The soprano saxophone and vibraphone are the two most common examples of this.

Bioluminescence is written in the tradition of an orchestral tone poem, in that we move from one section to the next in a progression that changes in themes and orchestration but that allows cohesion between the “movements” so that the work can be understood as a whole.

In Two Lights we meet our first bioluminescent creatures that we will follow throughout the work, two small and blue-glowing krill that float seemingly aimlessly throughout the deep as they search for food in the form of “marine snow”. Denizens of a Liquid Night introduces us to a variety of new and strange creatures; the most sinister of these is the monstrous Angler Fish, which is portrayed by the bassoons and bass clarinet as they play their brooding quartet on repeated occasions. As the illuminated krill swim to safety they discover a new arena of feeding grounds and marine richness in Pathfinder.

The middle section of the piece is comprised of two fast sections which share material. The first of these sections, Tricks and Traps is an aggressive look at the hunters who patrol the dark waters and the devious tactics they use to lure prey into deadly traps. In Vampire! we meet one of the predators, Vampyroteuthis infernalis, or Vampire Squid who uses his glowing blue lures to seduce prey into his clutches.

The work concludes with Song of the Luminescent which is a reiteration of some of the themes as our glowing krill float among an endless sea of bioluminescent jellyfish, illuminating the water like a city of hanging lamps.
INSTRUMENTATION

1 Piccolo
2 Flutes
2 Oboes
1 English Horn
2 Clarinets in B-flat
1 Bass Clarinet
1 Soprano Saxophone
2 Bassoons
1 Contrabassoon

2 Horns in F
2 Trumpets in B-flat, (2\textsuperscript{nd} Trumpet uses Harmon Mute)
2 Trombones
1 Tuba

4 Percussion
  Timpani
  1\textsuperscript{st} Part- Orchestra Bells, Bass Drum
  2\textsuperscript{nd} Part- Snare Drum
  Vibraphone (4 mallets)

1\textsuperscript{st} Violins
2\textsuperscript{nd} Violins
Violas
Cellos
Double Basses

The score is written in C so all instruments are at written pitch, except for those instruments that will undergo octave transpositions; piccolo, orchestra bells, contrabassoon and double bass.
Denizens of a Liquid Night
Song of the Luminescent
<table>
<thead>
<tr>
<th></th>
<th>Picc.</th>
<th>Fl. 1</th>
<th>Fl. 2</th>
<th>Ob. 1</th>
<th>Ob. 2</th>
<th>E. Hn.</th>
<th>Cl. 1</th>
<th>Cl. 2</th>
<th>B. Cl.</th>
<th>S. Sx.</th>
<th>Bsn. 1</th>
<th>Bsn. 2</th>
<th>C. Bn.</th>
<th>Hn. 1</th>
<th>Hn. 2</th>
<th>Tpt. 1</th>
<th>Tpt. 2</th>
<th>Tbn. 1</th>
<th>Tbn. 2</th>
<th>Tuba</th>
<th>Timp.</th>
<th>Perc. 1</th>
<th>S.D.</th>
<th>Vln. I</th>
<th>Vln. II</th>
<th>Vla.</th>
<th>Vc.</th>
<th>D.B.</th>
<th>Vib.</th>
</tr>
</thead>
</table>
Zach Pfeifer (1982- ) was born in Baltimore, Maryland, and grew up just north in the rolling hills of York County, Pennsylvania. He played viola through grade school and attended Kutztown University of Pennsylvania where he initially became involved in the school’s jazz studies program under director Dr. Kevin Kjos as a jazz bassist. He studied jazz bass with Erik Unsworth and Scott Lee before his developing interest in orchestral music and composition caused him to switch his focus to writing music under the guidance of Dr. John Metcalf.

Zach is now earning a Master of Music in composition at Louisiana State University where he studies under Dr. Dinos Constantinides. He has also studied with Alejandro Argéellos and in Claremont, California with Thomas Flaherty. During the summer Zach works at Blue Lake Fine Arts Camp in Twin Lakes, Michigan, where he teaches music composition to middle school and high school students.

Currently, Zach lives in Covina, California with his wife Megan.