

2014

Momentum 2014

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From the Interim President

Dear Friends,

It is my great pleasure to invite you to read and review this year's publication of *Momentum*, a Columbus State University publication focused on highlighting the excellent research being performed by undergraduate students at this institution and at institutions throughout the United States and even the world. In a recent meeting with the editorial staff of this fine publication, I was excited to learn that their focus has expanded from encouraging undergraduate research at home to joining peer-reviewed journals featuring the work of young scholars from everywhere. This certainly represents a leap in scope and ambition. I was thoroughly impressed by the commitment and passion of the *Momentum* staff and that of their faculty advisors.

This year's *Momentum* promises to go even further than last year's admittedly outstanding publication. As students and faculty work together and the focus on undergraduate research increases on our campus, it only stands to reason that submissions will improve in scope, complexity, and significance. The fact that *Momentum* has broadened its focus to include publications from all over the world is a bold move to set the standard of research within its covers at an even higher level.

I left my meeting with the editorial staff more excited than ever about the work of our undergraduate students at Columbus State University. I know that as you review this year's publication of *Momentum*, you will join me in that excitement.

Sincerely,
Tom Hackett, Professor
Interim President of Columbus State University



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The Southern Regional Honors Council is calling for applicants to present at their 2015 conference, "Honors: Transcending Borders and Boundaries." Submissions should fall into one of three categories: symposia, poster session, or visual art.

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Additional information on Southern Regional Honors Council and the upcoming 2015 conference here:

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From the Editor

When *Momentum* first came into existence, it served as an outlet for Columbus State University students to publish their research. Last year's editorial board decided to take the journal a step further and make publication available to all undergraduate students in the state. This year we did not take a step; we took a leap. The editorial board began accepting submissions from universities worldwide. We received submissions from the United Kingdom, New Zealand, Ukraine, and Malaysia, as well as from students all over the United States. Collaborating with so many diverse students for the sake of research has been an amazing experience, and I would like to thank everyone who contributed to research and to our journal.

This is my second year with *Momentum* and my first as Editor in Chief. The journal has grown larger every year, both in terms of the number editors on the board and submissions. Through all of the continuous changes that the journal is going through, it has been a real challenge for myself and the other editors, but it was 100% worth it. It has been an absolute privilege to work on this journal, and I am so thankful to have been given the opportunity. I am extremely proud of the work that all of the editors have put into this publication. In particular I would like to thank Amy Adams, the Assistant Editor in Chief, who has made my job immeasurably easier, and Dr. Kyle Christensen, our faculty advisor, whose guidance and support has made all of this possible.

I plan on working with *Momentum* during the entirety of my stay here at Columbus State University. There have been many people who have put an immense amount of time and energy into making this publication grow and my goal for 2015 is to continue to grow that legacy. I cannot wait to see what the future holds for this journal.

Sam Chase

Editor in Chief



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"She Won't Have No Light": Temple Drake in Faulkner's *Sanctuary*Brittany Barron¹

In William Faulkner's text *Sanctuary*, Temple Drake, a seventeen year-old Southern belle, undergoes unspeakable trauma when she encounters Popeye, an infamous bootlegger. At first, Temple accompanies boys to dances, and they write her name upon bathroom walls. However, upon her arrival at the old Frenchman place where Popeye and other criminals live, Temple shrinks from their wanton grasps and tries to escape from their lewd activities. No one saves her, though. Popeye in turn rapes Temple with a corncob and kidnaps her. In the past, critics such as Cleanth Brooks condemn Temple as "rapport[ing] with evil" and Elizabeth Kerr believes that Temple "initiated ... the events leading to her rape." Yet, they fail to examine Temple's comatose, disturbed state of mind after the rape. Temple lacks the maturity to know how to escape her situation, for she still acts like a child and relies on others to help her, especially men. She develops a coping mechanism where she oscillates between the world of the living and the world of shadows; therefore, she never partakes in the multiple rapes that occur and maintains virgin-like qualities. Temple reacts to the trauma not only with the determination to stay alive, but also to numb herself to the pain. Although it may seem that Temple's actions perpetuate the rapes,

they only help her to cope with Popeye's torturous acts. Rather than flirting with evil, Temple flees from it and loses her ties to the living world in the process.

In William Faulkner's *Sanctuary*, Southern Belle Temple Drake undergoes a traumatic transformation upon encountering bootleggers in the dark Mississippi woods. Temple accompanies her drunk suitor, Gowan Stevens, to what locals refer to as "the old Frenchman place" where she meets Popeye, her impending kidnapper and rapist, among other dangerous, violent outlaws (Faulkner 8). Although Temple goes to dances with boys and Gowan finds her name written on a bathroom wall, Temple's actions pale in comparison to Popeye's. While some critics condemn Temple's behavior as whorish and perverted when her pretty looks tempt Popeye, they overlook Popeye's animalistic behavior when he rapes Temple with a corncob, locks her in a room at Miss Reba's brothel, and later allows other men to sleep with her. Instead of provoking Popeye and enjoying her promiscuous new life, as other critics have suggested, Temple numbly resists her fate. Temple's childish demeanor prevents her from knowing how to escape from her imprisonment. Thus, she enters a comatose-like state to cope with the ensuing horrific events.

Temple's childish demeanor illustrates her immaturity, which is demonstrated by her inability to

understand the evil in others. When Temple is first introduced, she looks like a woman. On the night of the dance, Temple is described almost solely in terms of her physical appearance: "Her high delicate head and her bold painted mouth and soft chin, her eyes blankly right and left looking, cool, predatory and discreet" (29). The words "bold," "cool," and "predatory" highlight Temple's physicality, suggesting she is a woman who wants men to notice her sexuality and womanhood. Once she enters the Frenchman place, though, her description changes. In the kitchen with Ruby Goodwin, a former prostitute, Temple resembles a child: "[Temple was] looking herself no more than an elongated and leggy infant in her scant dress and uptilted hat" (59). In comparison to Ruby, Temple's experiences with men seem like child's play, and she underestimates her knowledge of sex. Ruby recognizes Temple's immaturity when she tells her: "You've never seen a real man. You don't know what it is to be wanted by a real man. And thank your stars you haven't and never will, for then you'd find just what that little putty face is worth" (59). Even though Temple is seventeen years old, she still assumes that all men act respectfully toward women. Like a child, Temple looks at the world as innocent and kind. Before Popeye rapes her, Temple thinks of him, including the other men at the house, incapable of such violence: "Things like that don't happen. Do they? [The men here are] just like other people" (56). Though Popeye scares her, she decides to ignore her instincts about him. However, her childish perspective will

prove detrimental to her.

Similar to a child, she depends on other people to take care of her, specifically men. At home, Temple lives in the shelter of her father. Without her father's protection, she senses the foreboding horror if she stays at the Frenchman place; therefore, she tries to leave it, and she begs the other men to drive her to town. She says, "My father's a judge" as if those words will persuade someone to care about her safety (54). In order to stay out of trouble at home, she uses her father's name to provoke fear in others. Living safely within the range of her father's influence, she never needs to rely on anyone else, and no one gives her the chance to rely on herself. In the unfamiliar house, her father's name means little, and the inhabitants ignore her pleas. Caroline Garnier states, "[H]er efforts to impress [men] with her social status [and] her father's position as a judge . . . are all in vain" (165). Before the rape occurs, the men refuse to help her. They fail to provide her with an escape, and it seems as if they trap her. When she relies on men to take care of her, she only reinforces her helplessness.

Unable to find help from the men around her, Temple's behavior reveals that she lacks the confidence to rely on herself. She tries to run away from the Frenchman place; however, once she begins to run away, she runs right back: "In the hall she whirled and ran. She ran right off the porch, into the weeds, and sped on. She ran to the road and down it for fifty yards in the dark-

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ness, then without a break she whirled and ran back to the house and sprang onto the porch and crouched against the door" (65). Her inability to run away symbolizes the suffocating male influence that incessantly surrounds her. Without a man to give her what she needs—in this case, a car—or tell her what to do, she feels stuck between wanting to leave and needing a man's help that her father or another man usually provides. Temple wishes to escape, but she lacks the knowledge of where to go, especially on her own, when she thinks she needs a man's approval or protection.

Popeye recognizes Temple's naiveté, and he wants to exploit her vulnerability. Without an escape, Temple stays the night at the Frenchman place. When Popeye finds Temple and kills Tommy, a man who lives at the Frenchman place, for trying to protect Temple, Popeye claims his "whore" (Faulkner 49). With her childish demeanor, Temple lacks the defenses to fight Popeye. He then rapes her. The night before the rape takes place, Temple acts as if she already prepares for a terrible event: "[Temple] lay down and drew the quilt to her chin . . . her hands crossed on her breast and her legs straight and close and decorous, like an effigy on an ancient tomb" (71). One critic, Elizabeth Kerr, believes that Temple initiates the rape when she lays down as if she waits for Popeye to come to her bed. Kerr writes, "By her disobedience in going with Gowan and her refusal to leave the Old Frenchman place, Temple initiated and stimulat-

ed the events leading to her rape" (93). However, Joseph R. Urgo argues:

In Temple's mind the terror of expected harm is worse than the harm itself; to live in fear of rape is a greater terror than one experiences when attacked unexpectedly. Any given act has, at the very least, a beginning and an end . . . Terror is constant fear, constant rape. Temple's desire to have the act over and done with . . . is not complicity but a prayer for the nightmare to end. At least the act will end the terror, after which she will be able to sleep and be at peace. (439-40)

Rather than consent to Popeye's rape, Temple suffers through it in order to end her fear that it will occur. After the rape, with the worst over, Temple relinquishes her physical control to Popeye. Since Gowan abandons her, and her father remains out of reach, Temple needs a male authority figure. At first, she "shrink[s]" from Popeye, but she relents after he punishes her—he "grip[s]" the back of her neck—for her misbehavior (Faulkner 141). Thus, she regresses to childishness when Popeye feeds her a sandwich: "She took a bite obediently . . . she ceased chewing and opened her mouth in that round, hopeless expression of a child" (141). She reacts "obediently," for that remains the only way she knows how to. Temple will later recall her attitude about the events leading up to and following the rape: "It just happened. I don't know. I had been scared so long that I guess I had just

gotten used to being" (215). Like a "scared" child, she only wants her fear—that the previous violence will reoccur—to go away, which means getting "used to" submitting to Popeye's authority—at least physically. With only her childish self to depend upon, Temple views this as her only option.

Although Temple joins Popeye on his ride to Miss Reba's brothel, she flees from the evil that surrounds her, and she never associates with it. Critic Cleanth Brooks argues that Temple adjusts to the circumstances after the rape. Brooks states, "In nearly every one of Faulkner's novels . . . men idealize and romanticize women, but the cream of the jest is that women have a secret rapport with evil which men do not have, that they are able to adjust to evil without being shattered by it" (13). However, after Popeye rapes and kidnaps Temple, the events damage her irreparably. Though it seems that Temple acts with complicity in the events before and after the rape, she thwarts the evil that threatens to consume her. When Temple recounts Popeye raping her to Horace Benbow, a lawyer investigating Tommy's death, she says, "I wasn't breathing then. I hadn't breathed in a long time. So I thought I was dead . . . I could see myself in the coffin. I looked sweet—you know: all in white. I had on a veil like a bride . . . I could see all the people sitting around the coffin, saying Don't she look sweet" (219). If she thinks of herself as dead, she restores her virgin-like, pure qualities. Her death makes the rape nonexistent.

Furthermore, when Temple arrives at the Frenchman place, Popeye calls her a "whore" and Ruby calls her a "doll-faced slut," without knowing her enough to make such cruel judgments (49, 57). Temple's vision of people saying she "look[s] sweet" elucidates that she wants to feel pretty and clean again after they bully her and make her feel dirty. Rather than embracing the evil that surrounds her and turning into the "whore" Popeye deems her, Temple fights it by reimagining the violation he acts upon her.

Once the rape takes place, Temple develops a coping mechanism in order to avoid the trauma that she experiences. She rejects her gender and age as a means to disassociate herself from the traumatic events. Besides imagining death, Temple imagines herself to be a man. As Temple continues to recall the rape, she says, "I ought to be a man. So I was an old man, with a long white beard, and then the little black man [Popeye] got littler and littler and I was saying Now. You see now. I'm a man now . . . I could feel it, and I lay right still to keep from laughing about how surprised he was going to be" (220). As an old man, she rejects her beauty and body, which entice Popeye to rape her in the first place. In the beginning of the novel, she seems to take pride in her sexuality. However, she now wishes to discard it. The old man image creates another way for Temple to end her life—this time, her life as a woman. In developing a coping mechanism, she never faces the trauma that occurs. She tells Horace that during the rape, she "wanted to go

to sleep" (218). Her flippant response toward the rape concerns her more than the significance of events and underscores her continuously childish disposition. Her coping mechanism makes it seem as if the rape never happens.

Temple further develops this coping mechanism at Miss Reba's brothel when she begins her psychological descent into a darkening temperament. After Popeye locks Temple in one of the brothel's bedrooms and forbids anyone to allow her to leave, she exists in a stupefied state: "She thought about half-past-ten-oclock in the morning. Sunday morning, and the couples strolling toward church. She remembered it was still Sunday, the same Sunday, looking at the fading peaceful gesture of the clock. Maybe it was half-past-ten-this morning, that half-past-ten-oclock. Then I'm not here, she thought. This is not me" (152). In this state of mind—not knowing the time, disassociating with her location, and feeling detached from her body—Temple drifts between the world of the living and the dark shadows of death. Shadow imagery symbolizes Temple's state of mind. Throughout her time at the brothel, like a shadow, Temple's mental and physical awareness disappear. During Temple's first night at the brothel, Temple catches "a glimpse of herself like a thin ghost, a pale shadow moving in the uttermost profundity of shadow" (148). Here, Temple exists as a shadow within a shadow, which annihilates her physical body. Temple's state of mind and physical appearance will continue to disintegrate as she

spends more time at the brothel.

During Temple's mental and physical disintegration, the color imagery associated with Temple changes, and her strength begins to dissipate. When Horace visits Temple, Minnie, Miss Reba's servant, says, "You'll have to talk to her in the dark . . . she won't have no light" (212). Light, a bright, hopeful presence, no longer appeals to Temple in her shadowy existence. She seeks anything that blocks the living world from her view. The girl who believed that "things like that don't happen" turns cynical: "She stared for an instant at Horace with black antagonism" (214). Temple's antagonistic look suggests that Popeye's violence causes her to think a man's sole purpose is to violate her. With her new black stare, Temple's luminous beauty turns into darkness: "Her eyes black in her livid face" (224-5). Her eyes, which used to look "cool" and "predatory," now appear black—a monotonous, blank color. They once symbolized her sexual availability and flirtation, but now they symbolize her apathy and newfound place in darkness. When Temple dances with Red, one of her sexual partners at Miss Reba's, she "murmur[s] to him in parrotlike underworld epithet, the saliva running pale over her bloodless lips" (239). The underworld alludes to death, and like a shadow mimics a shape, Temple only mimics a living being. With her bloodless lips, Temple loses another womanly feature—her usual red lips—and resembles a corpse. After all of the terrible events that occur, she belongs in the deathly underworld. The longer Temple asso-

ciates with Popeye and Red, the more she forgets her own actions and feels disconnected from her own body: "She filled her glass, watching her hands perform the action" (236). Moreover, when she tries to leave the club where she dances with Red, "She thought that she was leaning against the wall, when she found that she was dancing again" (240). When Temple disappears into her underworld, she no longer controls her body. During sex and other physical activities, such as walking or dancing, she allows others to control her body. This further removes her culpability or complicity, and Temple's connection to the living world continues to fade.

Temple's digression into a stupefied state becomes permanent once she finally escapes Popeye's control and goes back home. At the trial for Tommy's murder, although Temple regains her color—"her mouth painted into a savage and perfect bow"—the word "painted" suggests that Temple's newfound color is a façade (284). She returns to her father's protection and control, and she maintains her stationary, numb life in her underworld: "[Temple's] face [appeared] in miniature sullen and discontented and sad. Beside her her father sat" (317). Instead of flirting with evil, Temple's encounter with it causes her to leave her life behind for darkness. She merely replaces the girl who Popeye violates with the girl who once went on weekend dates. During her time at Miss Reba's brothel, she remembers, "I have a date tonight with [a boy] . . . But she couldn't remember who it would be . . . She'd

just dress, and after a while somebody would call for her. So I better get up and dress, she said, looking at the clock" (152). She begins to dress for a date until the happenings at the brothel interrupt her. Now, she dresses for a similar pleasant occasion in "her smart new hat" that she wears at her father's side (317). Sitting with her father, she acts as if the events at the Frenchman place and at the brothel never happened. She returns to her father's authority just as she left it, and she marbleizes her numbness.

Temple Drake, a beautiful, young, and privileged girl, learns that her sexuality and womanhood attract the animal instincts in the men around her. Although Popeye violates and abuses Temple, she overcomes the relentless terror he imposes upon her. She gives up her mental stability in order to do so, though. At the Frenchman place and later at Miss Reba's, Temple wanders from the living world of light into the underworld of motionless darkness. In a comatose-like stupor, Temple never experiences the rapes or violence, the terror subsides, and she keeps her childish demeanor. In the darkness, she finds a transitory peace and temporarily escapes men's influence in her life, though she ultimately returns to a man, her father, for security and a new immobile state.

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"Michael": Wordsworth's Overture to the Next Generation

Anthony Cunder¹

Wordsworth's poem "Michael" emphasizes the danger of an inheritance improperly offered and irresolutely accepted. It flows across the generations with pastoral language, reminiscing about the past while offering a warning for the future. Industrialization and the renunciation of Nature both serve as themes for critique in "Michael," dangers that threaten to destroy the pastoral way of life as Wordsworth's literary successors threaten to depart from his pastoral style. Wordsworth enjoins these inheritors of literary influence to remember the past and be guided by it, warning them simultaneously of those who might lead them falsely away from that inheritance and into a polluted world where Nature and success are clogged by the fumes of industrialism and the disappointment of broken covenants.

William Wordsworth's poem "Michael" not only looks to the past with a critical eye but cries out to the future with a word of caution for those who will take up Wordsworth's mantle and carry on the legacy of their ancestors. A pattern of inheritance is prevalent throughout the poem; yet it is not the inheritance of past generations in which wealth and prosperity was guaranteed for some. Rather, it is an inheritance of misfortune that threatens to befall the heir should the par-

ent generation fail in its duty to instill in its inheritors a connection to Nature, agrarian life, and pastoral ways of living. In the 1800 edition of *Lyrical Ballads*, Wordsworth subtitles "Michael" as *A Pastoral Poem* (Wordsworth 320). Judith Page in "'A History / Homely and Rude': Genre and Style in Wordsworth's 'Michael'" examines the relationships not only among the "narrator and the communal values Wordsworth celebrates (621), but also between the genre of the poem and its message; the "pastoral" text and its relation to literary tradition up to that point; and the contrast between urban and rural environments that plays out within the narrative (621-2). I suggest that the Sheep-fold in particular emerges as a symbolic liminal space that has the potential to protect and preserve the pastoral way of life, standing between an encroaching industrialism and an agrarian lifestyle; but its value must be recognized and privileged rather than ignored or misplaced, as Michael does. Though the Shepherd begins to create this fold that will protect not only his sheep but also his son, his focus on developing and raising his heir shifts to a misguided desire to retain all of his land at all cost when it is threatened with forfeiture. Thus, while the poem embraces the pastoral in genre, style, and content, it also recognizes the dangers that could arise from a blind adherence to tradition and prioritizing the land itself over the heir who will one day cultivate it. Wordsworth writes:

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Faculty mentor: Dr. Angela Weisl.

although it be a history
 Homely and rude, I will relate the same
 For the delight of a few natural hearts;
 And, with yet fonder feeling, for the sake
 Of youthful Poets, who among these hills
 Will be my second self when I am gone.
 (34-39)

The poem is admittedly a history of sorts, a look into the past; but it is not one that remains there. The word "history" itself implies that it is a retrospective analysis of prior events, recording them from the perspective of the present—the future in relation to the events described. The syntax also suggests progression, moving in sequence from "with yet fonder feeling" to "for the sake of," and finally culminating with "who among these hills will be." The progress in the poetry mimics the progress in the message: the poem looks to those who will be Wordsworth's "second self": they will not be identical to Wordsworth, but they will be a second Wordsworth, a new generation that draws from the past. Page also offers this interpretation, claiming that "Wordsworth preserves the pastoral and transmits it to future poets" (634), turning the literary genre and the text itself into a Sheep-fold that will safeguard the values represented by such a structure.

Whether or not this second generation of poets will receive the influence of the pastoral is yet to be determined, however. The genre of naturalistic ideals and a connection with nature is jeop-

ardized by the push toward industrialization in the eighteenth-century. The events of the poem as well as the structure grasp the idyllic lifestyle of a rustic shepherd and reach out to the audience to guide them just as the shepherd interacts with and safeguards his sheep. There is responsibility in this role, though—it is the duty of the current generation of pastoral poets to guide the next so that they are not alienated from a genre that connects poet and audience along with character and Nature. Page discusses the debate over the proper form of the "pastoral" that took place in the eighteenth-century, and the conflict between the "rustic" and "refined" versions of the genre (623). She incorporates Hugh Blair's view, which "anticipat[es] Wordsworth's attitude" and suggests a compromise between the classical versions of refined poetry and the rusticity of common depictions of rural life (624).

Wordsworth himself "does not adopt an archaic diction or dialect" (Page 630) which would serve to alienate readers, but rather utilizes the language of the King James Bible, associating such a style "with the flowering of English as a potentially timeless language of natural passion" (630). He attempts to weave a thread, then, through the narrative, evoking an empathy from readers, pulling them into the story of Michael and his misfortunes to create a more effective warning against Michael's own mistakes. The poem is aware that this new generation of poets and readers may still be misguided, and so it

speaks to the "youthful Poets," Wordsworth's "second self when [he] is gone" (38-9). The narrative centers around the youth, speaking to them in a language they might understand: the language of a pastoral shepherd and his son. There is a specific appeal to the Poets "among these hills," narrowing his petition to the younger generation that grew up in the countryside, away from the pollutants of city life.

It is in this life, too, that Michael lives, a Shepherd who watched over his flock with a keener eye than most men (Wordsworth 40-47). For him,

the green valleys, and the streams and
rocks,

...had laid

Strong hold on his affections, were to him

A pleasurable feeling of blind love,

The pleasure which there is in life itself.

(Wordsworth 63-77)

Michael finds refuge in this pastoral land, yet it is a "blind love" that moves him, leading him into error when conflict later arises. The land is a foil for Michael—it accomplishes what he fails to do. The land "had *laid / Strong* hold on his affections," capturing his emotions: this foreshadows Michael's attempt at *laying a strong* foundation for his sheepfold, a symbol for protecting and guiding his heir. His ultimate failure, though, resounds with the unfinished sheepfold, despite the narrator's "labor to shape these stones [of the

sheep-fold] in his highly wrought narrative [which fulfils] Michael's covenant with Luke by recording the story for present and future generations" (Page 633). Michael placed more value on his land and retaining the property than on cultivating and retaining his son, the inheritor of the property. Michael fears when "In surety for his brother's son... / [He] Was summoned to discharge the forfeiture / ...little less / than half his substance" (Wordsworth 211-7) that "A portion of his patrimonial fields... / Should pass into a stranger's hand" (224-31). His desire to keep all of his land overrides his patrimonial and pastoral duty to his son—to keep Luke in the fields and away from the pollution of urban life. In an attempt to retain all of his property, he sends Luke into the city to earn enough so that the lands might be unmortgaged. He decides this hastily, though, as Michael declares, "To-morrow, or the next day, or to-night: / --If he *could* go, the Boy should go to-night" (Wordsworth 281-2). And although Michael does lament briefly before sending Luke away, "when though art gone, / What will be left to us!—But, I forget / My purposes" (401-3), he does not heed his hesitation or listen to the warning resounding in his own heart. He recognizes for a moment the danger of sending Luke away, but fails to acknowledge this danger and does so anyway.

Tracy Ware argues in "Historicism Along and Against the Grain: The Case of Wordsworth's 'Michael'" that "Michael's desire is not just to have the land free of financial burden but for him

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to see it free as soon as possible" (373). Examining Geoffrey Hartman's reading of "Michael," Ware analyzes three main points: that "'Michael' shows Wordsworth's belief that the Industrial Revolution is 'divorcing man from the earth as effectively as a debased supernaturalism;' 'Michael' is in some sense a retelling of the story of Abraham and Isaac; and, most important, Wordsworth 'establishes ... a strange identity between himself and his main character'" (361). The first analysis is most related to my own arguments; the second can be integrated within my discussion of religious symbolism; and the third is one with which I am in partial disagreement. I acknowledge that Wordsworth conflates his generation of poets with Michael, but there is evidence in the poem that suggests Wordsworth's condemnation of certain actions taken by the shepherd—most notably his breach of the covenant that has been entrusted to him, evidenced by the narrator's own observed desire to narratively "complete" the sheepfold and thus compensate for Michael's own failure as Page discusses. Therefore, though he may be temporarily equating himself with Michael, Wordsworth distances himself from the ultimate course of action that leads to Michael's—and Luke's—downfall.

The impulse to send Luke away not only severs the Boy from the pastoral lands which provided so much pleasure for his father but also takes him from Michael's sight, interrupting that which once gave Michael joy, when:

ere yet the Boy
Had put on boy's attire, did Michael love,
.....
To have the Young-one in his sight, when
he
Wrought in the field, or on his shepherd's
stool.... (Wordsworth 159-63)

It is the older generation's responsibility to watch over their inheritors, guiding them along the path to a successful and worthwhile existence. This interaction between father and son highlights the interconnectedness between Michael, Luke, and Nature, using the pastoral genre to fuse the poetry itself to the characters in it. Yet when Michael pushes Luke away in the hopes of quick financial gain—stimulated by the Industrial Revolution, as Hartman notes—he breaks that covenant and fails in his duty as a Shepherd. As Ware also argues, "Michael makes the wrong choice for reasons that are partly selfish but hardly evil; his motives are understandable and forgivable, but they are flawed" (373). The poem cautions Michael's generation—and indeed, the readers of the poem—against making the same mistake as the shepherd, a mistake which leads to Luke's downfall. His collapse is described:

Luke began
To slacken in his duty; and, at length,
He in the dissolute city gave himself
To evil courses: ignominy and shame

Fell on him, so that he was driven at last
 To seek a hiding-place beyond the seas.
 (Wordsworth 442-7)

Luke's exact vices are never elucidated: what vices he comes to possess are not important. Rather, the stress is on how he got to the point of such ignominy. In pushing Luke away, Michael removed him from his care. "Ignominy and shame / *Fell* on him" (445-46 emphasis added), implying again that Luke, as a Boy, was the passive recipient of the inevitable result of Michael's severance of the pastoral covenant with him. There is also reference to the biblical Fall, but now it is the vice that falls and not the man, inverting the culpability: it is not the Boy's fault, but the very nature of the vices themselves and the locale and environment in which they are found. Luke was "*driven... / To seek a hiding-place beyond the seas*" (446-47 emphasis added) as an object that is acted upon externally and forced to follow a particular course.

The warning, then, is both a plea to the younger generation to maintain a reverence for Nature and to understand that sometimes the past's influence on the present may be flawed; and, additionally, to the progenitors to refrain from pushing their heirs away from the ideals of pastoral life in favor of industry and the illusion of quick financial gain. This is brought to the forefront in Michael's address to Luke at the site of the Sheep-fold:

I still

Remember them who loved me in my
 youth.

But, 'tis a long time to look back, my
 Son,

And see so little gain from threescore
 years. (Wordsworth 365-73)

Michael is absorbed by the past, yet in a negative way, seeing only the weariness of laboring for "threescore years" and gaining so little profit. Remembrance of the past is not discouraged, but it must be done in a positive way, such as when Michael recalls the green valleys, streams and rocks with joy. One particular symbol within the poem acknowledges this theme of remembrance and "passing on" the traditions of the past from one generation to the next. A stanza is dedicated to Michael's carving and bequeathing of a shepherd's staff to Luke; what should be the culmination of his eighty years of labor—his link to the land and to his son—turns Luke into "Something between a hindrance and a help" when he stands "as a watchman... / At gate or gap, to stem or turn the flock" (Wordsworth 180-193). He was "prematurely called" to this office, as Wordsworth writes (187), but it led to a greater bond between father and son as "nought was left undone which staff, or voice, / Or looks, or threatening gestures, could perform" (192-93).

When the staff is forgotten, though, and the heir is forced away from the rustic way of life, that is when the parent generation fails. In "Wordsworth and His 'Michael': The Pastor Passes," Sydney

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Lea questions, "Why, instead of dispatching Luke, does the father not permit him to work the land, to save it, as he himself has done against similar obstacles?" (60). Although Lea recognizes Michael's fault in dispatching Luke, she argues that "[i]n defending Michael, the poet defends himself" (60). I disagree that Wordsworth defends Michael's decision. He is certainly praising Michael's initial connection to the land and his attempt to impart that reverence to Luke through the Shepherd's staff, but ultimately Wordsworth condemns Michael's decision to send Luke into the city and leave the sheepfold unfinished. Lea purports that "Wordsworth...fulfills that covenant which *Luke* has sundered" (59), yet it is Michael who violates the covenant, rather than Luke, by leaving the sheepfold unfinished. As such, Wordsworth is not Michael's heir, but his contemporary, attempting to transmit to the youthful poets a love for the pastoral just as Michael attempted—and failed—to do the same for Luke in the physical sense. Ware corroborates this argument, explaining that "[i]t is Michael and not Luke who decides that Luke must go to the 'dissolute city' (l. 444), thereby breaking the covenant between the living and the dead" (372). I would extend the blame even further and claim that Michael severs the covenant not only between the living and the dead, but between himself, nature, and his son—a living covenant that depends upon Michael's care to survive just as much as Michael's sheep rely upon the shepherd's attentions.

The Sheep-fold on which Michael perennially works embodies this failure and stands unfinished as a glaring admonition of Michael's own inability to finish a pastoral parent's duty to cultivate and raise his child to work the land. That which is meant to protect the flock is begun, but never finished, just as Michael began his work as a father and mentor but breaks the covenant with Luke by pushing him away. "This was a work for us; and now, my Son, / It is a work for me," Michael says (Wordsworth 385-86). The task of raising Luke and successfully bringing him into a life symbiotic with Nature is now broken; the cooperation between father and son abandoned. Michael fully reverts to the past as he laments:

—I will begin
again

With many tasks that were resigned to
thee:

Up to the heights, and in among the
storms,

Will I without thee go again, and do

All works which I was wont to do alone,

Before I knew they face. (Wordsworth
391-96)

Michael reduces himself to his earlier state without any progress, not simply remembering past times but in truth returning to them. He says he will "begin again," implying a cyclical process, an admission of defeat. He declares also that Luke's

tasks were “resigned” to him—could there have been hesitation in transferring these pastoral duties to Luke? Was Michael negligent in his instruction? Wherever the breaking point began, Michael ultimately reduces himself to doing once more all the works he was wont to do alone. This reversion is criticized: it disrupts the natural flow of life and effectively precludes the parent generation from bestowing the land upon the next generation. It is revolution rather than evolution. Lea explains, “The old man’s strength abides in his commitment to ‘sheepland,’ yet that strength now serves time and not a future ideal” (66). His severance of Luke’s connection to the land and his revocation of the commitment to raise and foster the next generation return to haunt Michael as all that he fears comes to pass and at Isabel’s death “the estate / Was sold, and went into a stranger’s hand” (Wordsworth 474-75).

The cottage and its dissolution are subsequent motifs that represent Michael’s failed guidance. First, Wordsworth speaks of the Housewife:

[She] hung a lamp;
An aged utensil, which had performed
Service beyond all others of its kind.
Early at evening did it burn—and late,
Surviving comrade of uncounted hours.
(Wordsworth 114-18)

“Utensils” indicates that the light exists for service. “Early at evening,” reveals for whom the light exists: the progression of the younger gen-

eration into its later phase of adulthood, just when such guidance is most sorely needed. This guiding light, with its roots in the past “was famous in its neighbourhood, / And was a public symbol of the life / That thrifty Pair had lived” (Wordsworth 129-131). The diction admits the symbolism explicitly, and continues:

so regular
And so far seen, the House itself, by all
Who dwelt within the limits of the vale,
Both old and young, was named THE
EVENING STAR. (Wordsworth 136-39)

The old come before the young, underscoring again the progression from one to the next. The flow of pastoral inheritance is from the old to the young—not from the young to the old—both in poetry and in pastoral life. The old were the first to see this Evening Star, and it is their duty to guide the young to a proper understanding of it. Deanne Westbrook concentrates on this lamp, noting that “such emphasis [on the lamp by the narrator] invites attention to [it] and its significance within the parabolic frame” (112). She argues that the poem not only incorporates Old Testament figures, language, and images, but that the very form of the text itself is a parable that reflects New Testament narrative structure (109). She suggests that the parable form of the poem reflects Wordsworth’s own predominant concerns about the “spirit of things” over the “dead letter” and reveals why it is written in blank verse rather than the rhymed structure

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common to such "simple subjects" (Moorman qtd. in Westbrook 110). The lamp, then, according to Westbrook, "establish[es] a metonymic relationship between cottage and lamp, and the 'eternal' nature of both, pointing to a metaphoric identity between things earthly—cottage, lamp—and things hidden, mysterious, heavenly" (112). Yet she also points out that "Wordsworth's Evening Star is not eternal, but a human artifact existing in the world of time" (112). Nonetheless, it is "spiritual light" that the lamp sheds...enabling one to 'see and tell / Of things invisible to mortal sight'—the parable maker's task as well as the poet's" (Westbrook 112). The collusion, then, of poet and pastoral father emerges in the symbolic lamp, a light that guides the characters home and the children toward the pastoral as well as representing the parabolic task of the poet in transmitting this spiritual connection to the land and the pastoral form to successive generations. When Michael fails, though, in his role as Shepherd and guide to the younger generation "The Cottage which was named the EVENING STAR / Is gone—the ploughshare has been through the ground / On which it stood..." (Wordsworth 476-8.) The pastoral life—symbolized by the ploughshare—without an inheritor becomes itself the destruction of the sheepfold, turning in on itself without a guide, without a shepherd to continue the work of previous generations. "[T]he remains / Of the unfinished Sheep-fold" too "may be seen / Beside the boisterous brook of Greenhead Ghyll" (480-2), Wordsworth describes. Michael's failure leads to the destruction of the

cottage that once served as a guide through the night—a North Star for the valley—and the passing of his lands "into a stranger's hand" (475). The cottage's light—everything in the poem, in fact, as Westbrook comments—"is both what it is and something else, like the lost sheep, the lost coin, and the prodigal son of [the Gospel writer] Luke's own parables." All three of these subjects consequently play a part in "Michael": the sheep are both pastoral animals and symbols of the next generation; the coin represents financial wealth and the dangers of seeking it too readily above the pastoral lifestyle; and Luke himself stands as the prodigal son, but the parable is inverted in Wordsworth's poem. Rather than making it the son's choice to leave the father, the text places the decision on the Michael to push his son away, emphasizing the perversion of a father exiling his son by placing it in contrast with the Biblical parable.

Religious allusion continues in Michael's very name, which, in Hebrew, means "Who is like God?" This translation, through the veil of a name, interrogates the shepherd's own ability to be like the Good Shepherd. Can he lead his flock to safety? Unfortunately, he cannot. "He is an inadequate Abraham," Ware says, "who sacrifices his son unknowingly and unnecessarily, breaking his covenant with the past before Luke breaks his own" (373). Ware uncovers a religious inversion, noting the parallel (as other critics have) between Abraham and Michael. Michael is an "inadequate" substitution, failing to match such a

biblical figure as he “substitutes up in the scale of being [by sending Luke into the city], while Abraham substitutes down [in offering the ram (property) for Isaac]” (Levinson qtd. in Ware 366).

In Luke’s name, one can find the “light giver,” derived from its Latin origin. Additionally, its biblical interpretation is often understood to mean “luminous,” or “white.” In what way, then, is Luke a giver of light or deserving of the purity that is equated with “white?” By the end of the poem, he is deserving of neither. However, while a child and while under the care of Michael, Luke *was* pure, and he certainly had the potential to forge a symbiotic bond with the land if his father had not sent him away. It was Michael’s tarnishing of Luke’s original purity that leads to Luke’s downfall, and it is therefore wholly his father’s responsibility. The next generation of poets is equated with Luke, making them the “givers of light,” who begin as white and as innocent as Luke. They are warned, though, of the dangers of industrialization that may be forced upon them and the resulting degradation that can occur.

Is Michael like God? He has the power to continue a covenant with Luke, but chooses to break it. It is now no longer the son who breaks the covenant—as Adam breaks his promise to God—but the father who renounces his commitment to the son. The theology, again, becomes inverted, with the criticism falling upon the older generation, the ones who should know better but fail to uphold their end of the unspoken agreement that

exists between men and nature. Adam and Eve were given the land to cultivate it and bring it to its fullest potential. Yet, in breaking the covenant it is the heirs who are banished from the Garden, sent into the outside world. In “Michael,” it is the bestower who severs the covenant. But even though it was his own decision to do so, Luke is still banished to the city, never to return to the Garden—to the pastoral life.

The poem “Michael” critiques the potentially cavalier attitude of the older generation toward the land, looking at it with “blind love” and failing to see the importance of instilling this love into the next generation. This can also extend to the genre of pastoral poetry as well. The poem calls out to Wordsworth’s successors “among the hills” to let themselves be filled with a fervent love of Nature. It warns against listening blindly to the unsound advice of the older generations when such advice would take the younger from the pastoral life and thrust them unwittingly into a world of urbanity. Wordsworth does this, Page observes, “not by imitating the style of another poet’s pastoral but by recovering and regenerating the original impulses of the form...to represent his own world and culture” (634). It is an outcry rooted in love of Nature that looks to the past, but only insofar as it can aid the future with its sweet remembrances. “[L]iterature—and literary genres,” according to Page’s estimation of Wordsworth, “can take the place of the dying folk traditions that nourished his [Wordsworth’s] youth” (634). “Michael,” then, chronicles the his-

tory of one family that could be applicable to many: whether or not the next generation—or the present generation—heed this warning and complete their own sheep-folds in time, however, is left to the hands of fate.

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Dangerous Beauty: The Evolution of Medusa Imagery in Greek Art

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While the ancient Greeks were portraying humans in a more naturalistic fashion, they depicted monsters as more vicious and unnatural. Most see this process as a natural evolution in art as materials change and an understanding of forms grow. However, pieces involving the monster Medusa began depicting her as a beautiful maiden as time went on. She went from a mask-like entity to a woman, a completely different direction than the other beasts during this time period. The reason behind the evolution of her image is not a natural one, but rather it is caused by a need for her depiction to be used as a symbol for the artists' or society's own purposes. Beginning with the earliest form of Medusa, the Archaic type, she is used as a device for protection or caution. In the next phase of her depiction, her purpose changes to show the differences of the Persians and Greeks by way of an overpowered woman. The last phase, or Beautiful Medusa, has the purpose also shifting again, into a attractive woman, void of terror. She becomes a creature that the viewer can relate to; whether it is a relation to their own self or to someone they know. She transforms into the true "dangerous beauty" that is innocently beautiful on the outside and with knowing the story, evil within.

A pair of eyes stares up from a Greek skyphos to send a foreboding message of caution or to protect the drinker from evil. The *Interior of A Black-figure Eye-cup Showing a Gorgoneion* from 520 BCE shows the image of Medusa that would evolve into a very different representation a century later [Figure 1]. Medusa is depicted as a sleeping maiden in an Attic Red-Figured Vase entitled *Perseus Cutting Off Medusa's Head As She Sleeps* from 450 BCE [Figure 2]. As she sleeps, a young man approaches Medusa; she is soon slain by the youth who seeks her head. Watching the event unfold is the goddess Athena, who waits for the trophy. Medusa is shown as a young maiden rather than the traditional cursed monster. The Gorgoneion first appeared after the Geometric Period in Greece, around the 8th century BCE, and her symbol has lasted from that time on. Her image is seen as an apotropaic device on various objects to warn of danger or malevolence and, at times, to protect those who wore her icon from evil. Her story would become canonical by the 5th century BCE, and, by that time, her depiction had changed; she went from a grotesque, mask-like face to a full-bodied beauty within a few centuries.

This paper focuses on vases ranging from the 5th to 2nd centuries that depict the transformation of the Gorgon Medusa. The image of Medusa on vases became more beautiful during and after

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the period of the Greek and Persian Wars. These images show bride abduction and a growing interest of the differences between the Greeks and Persians. Throughout the Greek period, her depiction relied on the purpose for their society and culture. The Archaic form, seen in *Interior of A Black-figure Eye-cup Showing a Gorgoneion*, would have been a symbol of caution, recognizable to all, or an image so terrifying that it would ward off evil. The next form, after first transformation takes place, is recognized as the Transitional form and is seen in *Perseus Cutting Off Medusa's Head As She Sleeps*. In this phase, the Gorgon begins to take less of a gruesome form as she develops a body and more human-like features, although she is still a monster. The next phase, referred to as the Beautiful phase, is seen in the Apulian Red Figure Krater, *Perseus and Athena With The Head Of Medusa*, from 385 BCE [Figure 3]. In this phase, Medusa is indiscernible from the other non-monstrous figures, except for her head of snakes. These vases show the chronological evolution of the image of Medusa due to the use of propaganda in the Greek world. This imagery revolved around the Persian Wars and the recovery that the Greeks endured. Medusa became a stand-in for the Persians, indicated by her dress patterns and the underlying cultural references to bride abduction.

Throughout the ancient world, the story of Medusa remained consistent, regarding her end and her beginning. Her parents, Phorcys and Ceto, both ancient sea gods, were known for their

monstrous children: the Graeae, the Gorgons, and Ladon. Medusa represents the interference of gods in human affairs; however, she is also an example of what happens if one is not virtuous. In Ovid's account in *Metamorphoses*, Medusa is raped in Athena's temple by Poseidon and is punished by the goddess for enticing Poseidon with her beauty. Athena blames Medusa for proudly flaunting her looks and curses her by turning her and her sisters into monsters. In Ovid's version, her hair is turned into snakes, contrasting Apollodorus' description, which does not mention Medusa's hair at all. According to Apollodorus, Medusa, along with her sisters, Stheno and Euryale, are described as having "scaly heads, boar's tusks, brazen hands, and wings". They also had "protruding tongues, glaring eyes, and serpents wrapped around their waists as belts". Medusa's acts of hubris and folly, the "seduction" of Poseidon, leads directly to her downfall, in which she is turned into the monster and later beheaded. The canonical version of her death is by Apollodorus, from the 5th century BCE, and recounts that, in order to honor his word, Perseus had to retrieve the Gorgon's head for King Polydektes. Like so many other Greek stories of pride and victory, the gods Athena and Hermes aid Perseus in his quest by giving him direction and items that will allow him to evade the Gorgon sisters. By using a pair of winged sandals, a helmet of invisibility, and a silver shield, Perseus flew down into the area in which the Gorgons slept and slew Medusa. Upon hearing her cries, Medusa's sisters went to chase

Perseus but could not because the helmet Hermes had given Perseus rendered him invisible. When Perseus beheaded Medusa, Poseidon's children, Pegasus and Chrysaor, were born.

According to W.R. Halliday, Medusa's beheading is an explanation for the Gorgon's head appearing on shields, buildings, citadels, walls, and other objects. Part of the myth of Medusa gives reason for this, as Perseus gives the decapitated head to Athena to put on her aegis, perhaps to protect her or show her power. The depictions of Medusa in the earliest works show her simply as a mask, as an entity rather than a full-bodied character. Though there were sculptures of Medusa with a body created during this time period, the face was still the central aspect of the depiction. The symbol of her head was often used as a talisman against the evil eye and also warned of danger. For instance, her grimace would be placed on a kiln or the door of an oven to inform of hazard. Medusa would also be engraved on cameos and gems so that the wearer would be protected from evil influences. More significantly, her image was placed on the shields and breastplates of soldiers. In this sense, Medusa's head becomes apotropaic, or having the ability to avert evil. Her image is so terrifying that it has the power to drive out terror. Her purpose in the *Attic Black-Figure Amphora featuring Heracles and Geryones* [540 BCE] is to be used as an apotropaic device since Medusa's head is placed on the shield of a soldier [Figure 4].

While modern audiences may associate Medusa

with snakes for hair, Archaic versions are instead mask-like as seen in the *Interior of A Black-figure Eye-cup Showing a Gorgoneion* [520 BCE]. Stephen Wilk points out that, in his account of Medusa, Homer implies that she, along with the other Gorgons, did not have a body, rather a colossal and neck-less head. In this context, Medusa is shown along with an over-sized face, with thick eyebrows and an exaggerated expression. Because of these features, the image of the Gorgon may have started out as masks depicting actors and dancers from a play or ceremony.

The archaic Medusa is set apart from the later versions by her face, which is presented in frontal view, not in profile. This presentation is due to her placement on Athena's aegis; it is positioned in full view so that no one can avoid her terror. An element that is specific to the Gorgon is her eyes. The depiction of larger eyes allows the viewer to understand which character and what story they relate to, seen in this representation of the Gorgon. In the *Interior of A Black-figure Eye-cup Showing a Gorgoneion*, the painter shows a Gorgon, presumably Medusa; when it is one head or a singular Gorgon, it is a direct reference to her. Her features match those of the average archaic Medusa. In addition to those features, Medusa is shown with hair on the top of head that flows down her face, rather than the snakes that are attributed later on.

In the depictions of the Medusa story, Perseus' representation remains somewhat static, only changing as the myth of what objects he carries

alters. Medusa's imagery is in constant transformation. The next stage of evolution for the Gorgon is referred to as the Middle, or Transitional, phase. During this time, other images of Medusa, along with images of humans, become more idealized, while monsters are still portrayed as gruesome. It is because of this time period that the question of motive behind the pieces of Medusa rises. Why does Medusa, a monster, become more idealized and beautiful? She was no longer a monster, but a woman to be conquered or an enemy to be killed. In *Medusa: Solving the Mystery of the Gorgon*, Stephen Wilk references Roscher's descriptions of the specific changes as the heads shrinking to be proportionate to the rest of the body and the creature acquiring a neck. The image of Medusa is not as wild and is more human-like in appearance. Throughout this era, lasting from the 5th to the 2nd centuries, Medusa transforms from a wild creature to a beauty, and Darius, king of Persia, had lost the first of the Persian Wars at the Battle of Marathon, in 490 BCE. These wars would lead the Greeks to view the Persians as the "Other" for their prideful ways, or hubris, which they could not overcome, and eventually brought them to their end. For the Greeks, the "Other" people were not malevolent because they could not overcome their hubris but because they lacked moderation and rationality.

Beginning in 480 BCE, the Greeks would come to another confrontation with the Persians that would enforce the idea that the forces could not

fraternize or come to an agreement with one another. It was the second part of the Persian Wars that would find the Greek states coming together to destroy the "Other" at the Battle of Salamis. Because of this unity, the imagery that followed the victory of the Greeks over the Persians often depicted the Greeks as disciplined people and the Persians as wild creatures to be slain. In Aeschylus' tale *The Persians*, from 472 BCE, he describes the interactions of the Queen of Persia, a counsel, a messenger from the battles, and the ghost of Darius. In a section of this account, Aeschylus describes a meeting that is held between the ghost of Darius and his wife, wherein they discuss the arrogant nature of Xerxes. Darius explains that it is because of his overconfident ways that Xerxes has lost to the humble Athenians. Xerxes has essentially destroyed the entire empire that his father had built because of his vain attempts at gaining more power. In *The Persians*, the Queen says, "My son has found his vengeance upon famous Athens to be a bitter one; the Eastern lives that Marathon had already destroyed were not enough for him." This shows the viewpoint the Greeks had of the Persians: they were at fault for their immoderation. The Greeks' view of the Persian peoples was foreign not only in the way that they lived their lives but in the way that they dressed and acted as well. Aeschylus notes in his work that the messenger must be Persian by the way that he runs. This shows that these foreign people are different even in the smallest of ways, which also included their textiles.

One way to discern Persians from Greeks was by their apparel, namely their patterned fabric. Since the Greeks began to simplify their culture visually, to them anything that was busy or irrational was foreign. In *Perseus Cutting Off Medusa's Head As She Sleeps*, Medusa lies asleep on a hillside, wearing a short Greek-style dress decorated with geometric patterns. The pattern on the dress is similar to the one worn by Antiope in *Theseus Abducts Antiope* [Figure 5]. Neer argues, in *Greek Art and Archeology*, that this is an example of using myth to show a political allegory. In *Theseus Abducts Antiope*, Theseus is the Athenian hero who abducts and rapes the Amazon, Antiope; however, in this rendition she is not only an Amazon but also a Persian, indicated by her dress. Antiope is identified as Persian by the pattern on her clothing because of the direct geometric influence of the Near East from the period. The pattern is a reference to how different the Persians are to the Greeks because of their contemporary interest in naturalism and ideal forms. This contrast between the two cultures shows Antiope and Medusa as the "Other," which does not belong within the Greek world. Due to the clothing given to them, it is clear that the women have a sense of wildness to them and, thus, must be tamed, or, in the tradition in the ancient world, abducted and controlled.

After the second Persian War, *Perseus Cutting Off Medusa's Head As She Sleeps* was created, showing Medusa as a wild beauty that must be asleep to be killed. Perseus has every reason to

kill her because Medusa is dressed as a Persian woman, even though her body and dress shape is Greek. The act of beheading is an association to bride abduction through the concept of control. Since the Amazon, Antiope was a foreigner, the story and portrayal of Theseus abducting Antiope showed the correlation between bride abduction and dominance in Greece. The concept that Medusa is a treacherous woman relates to the idea of bride abduction, and the scenes that depict her in this way render her as a form of "dangerous beauty." Her purpose lies on the line of being the captive "Other" and an abducted bride. Both, in this case, are the same, in that they are to be weakened and imprisoned for simply being themselves.

Bride abduction was common during this time period by both the Persians and the Greeks. The Greeks saw the act as retrieving the wild from an irrational world and assimilating that wildness into the rational world of the Greeks. For instance, an act of abduction by a god is seen in the same context; Persephone was in a field picking flowers when Hades abducts her and takes her to the Underworld. In the *Red-Figure Volute Krater showing the Rape of Persephone* from 340 BCE, Persephone is shown on the chariot of Hades after he abducts her [Figure 6]. The connection between Persephone and Medusa is evident in the notion that they are both raped by gods, Persephone by Hades and Medusa by Poseidon. In *Perseus Cutting Off Medusa's Head As She Sleeps*, Medusa is resting in her home with-

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out provoking danger, similar to the story of Persephone. In essence, the imagery of Medusa as the sleeping maiden revolves around the idea that being a foreigner or woman during this time made it reasonable for the Greeks to pursue her. This pursuit could lead to abduction, murder, or rape, all of which come from the single concept of male domination. The application of Medusa's imagery changed throughout the Classical world, shifting from a monster to an obscure beauty. The images of the "Sleeping Gorgon", as seen in *Perseus Cutting Off Medusa's Head As She Sleeps*, render the acts of Perseus as someone coldly completing a mission. The emphasis on her beauty shows a victory of the strong over the weak.

The last evolution of Medusa's imagery in the Greek world is the Beautiful phase, which emerges gradually after the 4th century BCE. Medusa no longer has a beard, fangs, her large grimace, or her oversized eyes. With all of these attributes gone, she is transformed into a young woman. Though, to show that Medusa is still inhuman, artists attach wings, and sometimes snakes, to her head. Her view is also changed during this time, showing her not only in profile but also in three-quarter view. This orientation is less striking and allows the viewer to see her as a softer character. In *Perseus and Athena With The Head Of Medusa* from 385 BCE, Medusa is seen in three-quarter view, with completely human-like features, except for the snakes in her hair [Figure 6]. Medusa has now become assimilated

into Greek society after being abducted. To the viewer, the abduction has been successful. The wild woman has been tamed by the Greek man and integrated into the rational society. She is shown with an idealized face, almost similar to that of Athena's, and no longer stands out amongst the figures but belongs there. The scene is similar to the others, in that Perseus and Athena are shown with the Gorgon's head. However, in this moment, Athena holds her head, and the aegis is shown with the reflection of the head, prepared for its placement. Medusa's depiction in this work is completely different than it was in the beginning of the myth. She is no longer an intangible monster, whose only use was to warn of or protect from danger, but a tool to teach the citizens that their foolishness would lead to their end because the consequences of the everyday world could be the same as the heavenly.

The reason for Medusa's transformation throughout the Greek period from the 8th to 2nd century BCE is because the constant change of her purpose in imagery. While other monsters would remain statically terrifying throughout the Greek world during these times, Medusa consistently became more attractive. The other monsters' purposes would remain unchanging, while hers transformed with what she could portray. Beginning with the earliest form, the archaic type, Medusa is used as a device for protection or caution. On the shield of the soldier in *Heracles and Geryones*, the purpose is clear that she is to pro-

tect the soldier and, at the same time, show his power. In the next phase of her depiction, her purpose changes to show the differences of the Persians and Greeks by way of an overpowered woman. Compared to one another, *Perseus Cutting Off Medusa's Head As She Sleeps* and *Theseus Abducts Antiope* shows that Medusa is a woman to be conquered and killed because she is different and considered the "Other". The last phase, or beautiful Medusa, the purpose shifts into a human being void of terror. She becomes a creature that the viewer can relate to, whether it is a relation to their own self or to someone they know. *Perseus and Athena With The Head Of Medusa* depicts the true "dangerous beauty" that is innocently beautiful on the outside and, with knowing the story, evil within.

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Figure 1.

Interior of A Black-figure Eye-cup Showing a Gorgoneion, Skyphos, Attributed to the Charterhouse Painter, Attic, ca. 520-510 BCE, clay.



Figure 2.

Perseus Cutting Off Medusa's Head As She Sleeps, Detail Attic Red-Figured Vase By Polygnotos, 450-440 BCE. New York Metropolitan Museum of Art.



Figure 3.

Perseus and Athena With The Head Of Medusa, Apulian Red Figure Krater, 385 BCE. Museum of Fine Arts, Boston, Massachusetts.



Figure 4.

Heracles and Geryones, Attic Black-Figure Amphora, ca. 540 BCE. The Louvre, Paris, France.



Figure 5.

Theseus Abducts Antiope, Attic Red-Figure Amphora by Myson, Ceramic, ca. 490 BCE. The Louvre, Paris, France.



Figure 6.

Rape of Persephone, Hades with His Horses and Persephone, Red-Figure Volute Krater, 340 BCE. Berlin State Museum, Germany.



Notes

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"And why Medusa, of the sisters sole

The serpent-twisted tresses wore, en-
quir'd.

The youth:—"The story that you ask, full
well

"Attention claims;—I what you seek re-
cite.

"For matchless beauty fam'd, with envy-
ing hope

"Her, crowds of suitors follow'd: nought
surpass'd

"'Mongst all her beauties, her bright love-
ly hair:

"Those who had seen her thus, have this
averr'd.

"But in Minerva's temple Ocean's god

"The maid defil'd. The virgin goddess
shock'd,

"Her eyes averted, and her forehead
chaste

"Veil'd with the Ægis. Then with vengeful
power

"Chang'd the Gorgonian locks to writhing
snakes."

6. Stephen R. Wilk, "Part 1: The Mystery." In *Medusa: Solving the Mystery of the Gorgon*, n.p. Oxford: Oxford University Press, 2000.
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- "The Gorgon and her serpents, he divorc'd
Her shoulders from her head. He adds how sprung,
Chrysaör, and wing'd Pegasus the swift,
From the prolific Gorgon's streaming gore."
9. W. R. Halliday, "Indo-European Folk-Tales and Greek Legend," (1933), quoted in Marjorie Milne, "Perseus and Medusa on an Attic Vase," *The Metropolitan Museum of Art Bulletin*, 4, no. 5 (1946): 126-130, <http://www.jstor.org/stable/3257993> (accessed September 14, 2013).
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- Wilhelm Heinrich Roscher was a German Classical Scholar who focused his studies on Greek and Roman mythologies. In 1896, he analyzed the image of the Gorgon and divided them into the three stages: The Archaic, the Middle, and the Beautiful.
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Lines 474-478.
 22. Alan H Sommerstein, Aeschylus. "The Persians." In *The Persians and Other Plays*, n.p. London: Penguin, 2009.
The Chorus says, "Well, it seems to me that you will soon know the whole story precisely. The way this man runs clearly identifies him as Persian, and he will be bringing some definite news, good or bad, for us to hear." Sommerstein explains that during this time period, there was a visible difference in how the Greeks and Persians ran, according to the parties at hand.
 23. Marjorie Milne, "Perseus and Medusa on an Attic Vase," p. 126.
 24. Richard Neer, *Greek Art and Archeology, A New History*, (New York: Thames & Hudson Inc., 2012), 212.
 25. See Athena's dress and Perseus' garb in Figure 3, their simplified clothing shows a rational way of thinking in contrast to the irrational and busy geometric patterns of the "Other" in Figures 2 and 5.
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Progress in the Face of Adversity:

How LGBTQ Activists in 1950s America Helped Shape the Current Movement

Amber Rolland¹

Many point to the 1969 Stonewall riots as the beginning of the gay rights movement in America, but the progress made by these and later activists would not have been possible without the struggles of the 1950s LGBTQ communities. America entered the Cold War with a high confidence in the perfectibility of society, leaving no room for those considered "deviant" (i.e., homosexuals and communists). The nation's growing concerns about the infiltration of these deviants in two of the most influential sectors in America – the government and Hollywood – resulted in extreme measures to remove these social and sexual anomalies from their positions in an effort to protect the integrity of the American citizen. As a result, homosexuals in this era faced deplorable depictions of themselves on the screen, in books, and in the headlines of the morning newspapers. They were at constant risk of public humiliation and losing their job, housing, and credit. Yet they still managed to come together and create support systems in the form of organizations and publications that would lay the foundation for later activists' success. The significant strides made by the adult generation of the LGBTQ communities in the face of such great adversity to assist their younger counterparts who had no other resources or

support were instrumental in forming the atmosphere in which these activists would later fight back in 1969. Without the groundwork laid during the 1950s, the face of the LGBTQ movement today would be quite different indeed.

Shortly following the conclusion of World War II, the United States entered the Cold War, ushering in an era of confidence in "the perfectibility of American society," in which there was no room for deviance.¹ The widespread concern that communism would give way to anarchism and chaos, temporarily set aside during World War II while the United States was allied with the Soviet Union, quickly reappeared. Anti-communist politicians warned of the danger of "communist influence," never giving clear examples and allowing the public's imagination to fill in the blanks amidst memories of the Russian Revolution that had fueled the First Red Scare. When Senator Joseph McCarthy declared to the Republican Women's Club of Wheeling, West Virginia, in early February of 1950 that he had a list of 205 names of confirmed communists working for the State Department, the resulting media circus only sparked more fear and paranoia. Anyone thought to be a threat to national security or American values had to be dealt with harshly, and suspected communists were not the only targets of what is now known as McCarthyism.

Family sat atop the pillar of American ideals, and its integrity had to be preserved. Homosexuals were considered inherently deviant and thus were viewed as subversives attempting to dismantle the central unit of American life. Just as any potential power that these suspected communists held in the government had to be taken away, so too did the influence of homosexuality have to be nullified.

Eager to protect the country from communism and homosexuality, various executive orders, policies, and laws were enacted, which resulted in the tight regulation and censorship of film, television, books, newspapers, and other forms of entertainment and print media. Homophobia washed over the nation, producing a climate in which "gay people became targets of institutionalized discrimination... [and] police harassment and entrapment."² President Eisenhower issued an executive order which legitimized homosexuality as a reason to fire someone from office.³ Hundreds suspected of communistic sympathies and/or homosexual tendencies (both the same in the view of the public in terms of deviance) were quickly removed from their positions in the government and entertainment industry.⁴ Concerns that foreign spies could extract important information from gay people in powerful government or military positions by using their secret sexual orientation as blackmail prompted a quick Second Red Scare house-cleaning.⁵ The closeted employees would be forced to either commit treason or face the stigma associated with being

outed, which was ironically caused by the same American public trying to preserve national security.

Unease at the possibility of deviants infiltrating two of the most influential mediums in American society further fueled the negative light in which non-heterosexuals were then portrayed during the Lavender Scare, the term used to describe the targeting of homosexuals during the McCarthy Era. There has never been a question of the powerful influence of Hollywood and the media on the public. Movies, television shows, music, books, and news have always shown people whom to consider role models and what to expect and hope for in life. Thus, representations of these deviant groups had to either cease to exist or become extremely negative to protect the nation from subversion and chaos. After all, "if Hollywood was 'conquered' by communists, would the citizenry be far behind?"⁶

Though these measures to implement a stern control over the entertainment industry and media sought primarily to protect the "wholesome" American society from corruption and infiltration by these threats to national security "who looked 'normal' on the outside (and therefore were even more dangerous than those easily spotted)," it was the "deviant," or non-heterosexual, population who were most affected by these changes.⁷ The thoughts, feelings, and actions of the gay communities throughout America were placed directly at the mercy of public opinion in the midst of these anti-deviant crusades, as the por-

trayals of non-heterosexuals both on the screen and on the page became increasingly more negative. This pervading feeling of fear created a particularly "challenging and confusing life" for those young gay and lesbian Americans who were just coming of age, leaving them feeling completely alone, worthless, and often suicidal.⁸ Meanwhile, the non-heterosexual Americans who had already come to terms with their sexuality saw support systems as their only option for comfort and progress and began to join together, laying the foundations on which the gay and lesbian rights movements of the 1960s and beyond would rest.⁹

The Depreciating Depiction of the Homosexual in Entertainment and Media

"Hollywood, that great maker of myths, taught straight people what to think about gay people and gay people what to think about themselves. No one escaped its influence."¹⁰ Moviegoers have often identified with characters in movies and television shows, turning to the screen to gain insight as to what form their life would take. During the Cold War, gay characters became the villains of films, departing from their earlier role of comedic relief. Glaringly obvious positive portrayals of non-heterosexual characters ceased to exist as the antigay fervor swept the nation, reducing any hint of homosexuality onscreen to a few subtleties. Some regulation codes were already in place when the Lavender Scare arrived, and the new ordinances concerning morality in movies and television only served to tighten the

noose around the typical gay movie character's neck, "specifically includ[ing] 'sex perversion' as a *don't*."¹¹ Even off screen, members of the film industry had to remain closeted or risk ruining their careers or perhaps even serving jail-time, as the "Hollywood Ten," a group of blacklisted entertainment professionals, did.¹² Gay thespians adopted new personas, choosing between the two extremes of rugged manliness and over-the-top flamboyance to avoid the stigma associated with homosexuality. In his 2005 autobiography, actor Tab Hunter recalled being tested in a film role opposite Liberace, with both of them hiding their sexual orientation from the public: "While I stayed in the closet, Liberace escaped 'exposure' by wildly overplaying his homosexuality, turning it into a nonthreatening caricature."¹³

Thus, any and all positive role models for non-heterosexuals were completely removed from the film industry, which had an unspeakable impact on those struggling to find justification in their sexuality in a time of persecution. Writer Armistead Maupin recalled, "[Films] show us what is glorious and tragic and wonderful and funny about the day-to-day experiences that we all share, and when you're gay and don't see that reflected in any way ever in the movies, you begin to feel that something truly is wrong."¹⁴ Homosexual men no longer pranced around on screen in their role of the harmless, asexual "sissy;" now gay characters were subjected to horrifically violent deaths movie after movie, show after show. Years before Vito Russo began

writing *The Celluloid Closet: Homosexuality in Movies*, he saw a movie as a teenager in which the main character killed himself after he was accused of being gay. He said of the experience, "That movie impressed upon me that homosexuality was something so terrible that you committed suicide. ...I had seen a character who I identified with, and this is what happened to him."¹⁵

While gay characters on the screen were offered left and right, novels depicting homosexual life in general were scarce during the McCarthy Era, leaving non-heterosexuals with few characters with whom they could identify. Pulp fiction novels, which displayed obvious references to homosexuality on their covers and in their titles, rose in popularity during this time period mostly due to the "forbidden" sexuality they offered straight readers. Though gay characters in these novels too typically had tragic fates, they at least "provided . . . some validation for queer readers."¹⁶

Still thirsting for any piece of information on their sexuality, homosexuals would have been left with medical texts. Homosexuality was still officially considered a mental illness at this time, and medical professionals like psychiatrist and medical writer Richard von Krafft-Ebing "argued that homosexuality violated the hidden laws of nature."¹⁷ Still other professional opinions demonstrated the sheer lack of knowledge about homosexuality during this time, claiming such absurdities as homosexuals being unable to whistle and only choosing green as their favorite

color.¹⁸ Non-heterosexuals, struggling to accept themselves and their behavior as normal and healthy, were only further discouraged by these kinds of ridiculous claims. Barbara Gittings was one of the countless young gay Americans who undoubtedly pored over every book they could lay their hands on that might discourse on homosexuality, and she found herself trying to adapt to the idea of a gay person as defined by the medical community:

I looked myself up in the books on abnormal psychology. I tried to find myself in legal books and encyclopedias. ...It was me they were talking about, but it wasn't me at all. It was very clinical; it didn't speak of love; it didn't have very much humanity to it. ...Everything I read said that [homosexuals] were deviants. So that's what I thought about myself.¹⁹

Further contributing to this idea of homosexuals as sinful anomalies and the ever-thickening cloud of oppression were newspapers, which regularly published the name, occupation, age, and address of each person arrested at a gay bar in bold headlines. These men and women were yanked out of the closet in front of their entire community, ruining their public reputation and almost always resulting in the loss of their job, credit, and housing.²⁰ Any incident in which a homosexual person's actions could be interpreted as being immoral or sinful was wildly blown out of proportion by newspapers. Three gay men in

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Boise, Idaho, were charged with engaging in intercourse with teenage boys, and the local newspaper, *The Idaho Statesman*, sparked a full-blown witch hunt by printing lines like "Crush the monster" and "This mess must be removed."²¹ For some gay people living in the area, the newspaper, which was supposed to be an unbiased part of the media, promoting the community's active endeavor to be rid of all homosexuals was the first indicator of the prevailing public opinion on homosexuality. War veteran Morris Foote was so terrified and ashamed of the situation that he picked up and left Boise immediately. "I had no idea that there was anything wrong with what I was doing. ...Not until 1955, when [the newspaper] put out an editorial that all homosexual activity must cease, that it was a sin of society."²²

These kinds of negative reports and articles were the only sources of gay news, thus further reducing the morale of the gay communities throughout the nation. Stories of bar raids, gay people being murdered in the street, and public officials being caught in homosexual acts stood alone with no positive coverage to counter them. An unsigned essay printed in *Time* magazine offered a glimpse at the prevailing public opinion of the era, stating that homosexuality was "essentially a case of arrested development, a failure of learning, a refusal to accept the full responsibilities of life."²³ Only scathing, critical accounts of homosexuality existed, and thus those gay Americans who had still not grown comfortable with who they were only had further reason to

believe the negative views of their sexuality were rational.

Some homosexuals began to work together to produce their own publications for the gay communities throughout the country, but they were limited by the stigma attached to their sexuality. The gay magazines could not wave flags in the faces of the general public celebrating the successes and redeeming qualities of specific homosexuals because it would have resulted almost immediately in the loss of that person's job along with the possibility of a slander lawsuit. Beyond that, it was understood without saying that outing another person would be extremely unfair, considering the repercussions faced by those who had been unwillingly revealed publicly.²⁴ Gay and lesbian organizations and publications were also still in their infant stages of development at this time, and they simply did not have the budget nor the sets of hands to make even a sizable dent in spreading the word about the new groups that were forming.

During this era Edythe Eyde founded *Vice Versa*, a newsletter for lesbians, and members of the Mattachine Society began publishing *ONE*, a magazine for gay men. The latter of these two encountered conflicts with the biased obscenity laws that had been enacted to control what one could put in print media and send through the mail. The double standard of these laws provided a much more lenient set of conditions for heterosexual material to be considered obscene, while, as gay *ONE* journalist Jim Kepner recounts,

"anything that mentioned homosexuality was obscene simply if it did not point out how terribly, terribly disgusting and evil homosexuality was."²⁵ In *Roth v. United States* (1957) the Supreme Court had vaguely defined obscenity as "whether to the average person, applying contemporary community standards, the dominant theme of the material taken as a whole appears to prurient interest."²⁶ *ONE* magazine was involved in the 1958 Supreme Court case *One, Inc. v. Olesen*, which dealt with the issue of whether or not their publication was obscene. Olesen, a Los Angeles postmaster, had inspected the magazine and found its stories and poems to be sinful and filthy. A major accomplishment in terms of the portrayals of homosexuals in print was achieved when the Court affirmed the magazine's right to exist and be distributed through the mail.

Ironically enough, it was this kind of negative opinion about gay material and press coverage about gay communities that initially helped further the gay movement more than homosexual publications did. Not only did these articles reveal the existence of gay populations and magazines, but they also "referred to 'deviant lobbies' that argued in favor of accepting homosexuality as a fact of human existence."²⁷ These gay organizations, forced to remain under the radar due to the oppressive atmosphere of the McCarthy Era, were essentially given free publicity to audiences beyond their budget and reach. "Without intending to, reports like this, which

were not uncommon, helped spread the word to gay men and women that they were not alone and that it was possible to fight back against police repression."²⁸

Two Ends of the Spectrum: Inspiration and Suicide amid Oppression

This slowly increasing optimism that life conditions for homosexuals could improve became a part of reality with the founding of the Mattachine Society in Los Angeles in 1950 by Harry Hay and a few other gay men. Despite the climate of fear and oppression, these charter members found it within themselves to begin meeting together to discuss how to make their voices as homosexuals be heard and counted. This was the first successful attempt at creating an organization through which homosexuals could discover that they were indeed not alone. Paul Phillips, a gay African American man who held a prominent position in his state government during this time period, began attending Mattachine meetings in an effort to find others like him: "Once I found out there were others besides me, I was much better able to accept myself. I was always a thorn in my own flesh because I was gay."²⁹ The formation of such an organization was certainly significant, considering the paradox that its formation created: "oppression would seem to guarantee silence but instead [bred] visibility and activism."³⁰

However, members of the Mattachine Society still did not advertise their participation or even the existence of the group too openly for fear of be-

ing exposed to the public. The core of the organization, along with each different cell, was kept secret as a preventive measure against the possibility of being outed.³¹ The extent of this secrecy is evidenced by the fact that when the Daughters of Bilitis (DOB), a lesbian organization, was formed in 1955, none of those women, who were all also homosexuals like the founders of the Mattachine Society, had known that the headquarters of an organization for gay men had been stationed in their city for two years.³²

The DOB was similar in many respects to the Mattachine Society, including a desire to educate the public and an internal focus through which the members "devoted themselves to sharing views on collective problems."³³ However, the most immediate cause of this group's inception was to provide a safe alternative to gay and lesbian bars, which were perpetually subjected to police raids that almost always resulted in the arrests and subsequent outings in the newspapers of most everyone inside. Mattachine member Hal Call recounted the constant danger one was in while at a gay bar, even when doing nothing wrong; he had seen a man be accused of (and arrested for) groping a man at the bar when he went to pull his cigarettes out of his sock.³⁴ The police would also lurk outside gay bars after they had made their raids to arrest anyone who exited in a mixed moment of panic and relief, thinking that the raid was over and they would be safe.

Another goal of the DOB was to extend a helping

hand to the younger generation of non-heterosexual Americans still struggling with coming to terms with their sexual identity. The aforementioned absence of positive role models for the gay community both on the screen and in the media wrought havoc on the psyche of still-exploring homosexual teenagers who had almost no other sources on what kind of person they could become, what kind of life they could live, or what society thought of them. They had no one with whom they could compare the similarities of their lives in order to gain an understanding of who they were. The non-heterosexual adults responsible for the organizations of groups like the Mattachine Society and DOB had already experienced the loneliness of coming of age in a nation that perceived them as "immoral, depraved, and pathological individuals," and so they sought to protect their youthful counterparts from feeling the same alienation and desolation.³⁵ Billye Talmadge, member of the DOB, expressed that the number one motivating factor behind her participation in the organization was "to educate [their] girls, to give them the answers that [she] had once needed and to give them some sense of who they were."³⁶

Most of the young homosexual generation battling internally over their confusion and loneliness were lost. Opportunities to learn about or seek out other homosexuals were extremely limited due to the atmosphere in which they were living. The possibility of the American youth being sapped of its strength by homosexuality, the

"epidemic infesting the nation," was such a concern for the vast majority of heterosexual adults that most teenagers were not even aware that a label describing their attraction to the same sex existed, let alone a population well into the millions of others just like them.³⁷ Homosexual teenagers, as a result, questioned their normalcy and self-worth, spiraling down a bleak path of depression and suicidal thoughts. Often they chose to endure the burden of their sexual identity in silence because even their family members and friends would have reacted negatively to the revelation of their homosexuality.

Talmadge encountered many young gay men and lesbians through her affiliation with the DOB, recalling in particular one girl whose parents had completely disowned her, even going so far as announcing her death in the local newspaper and setting up her tombstone, when she attempted to gain their support in her struggle.³⁸ The DOB received letters from desperate teenagers all across the country seeking acceptance and answers on what to do, how to find others like themselves, who to talk to, and what to read or watch to better understand themselves. "Every one of them felt like she was the only voice crying out in the wilderness."³⁹ Paul Phillips, mentioned previously, too had grown up feeling "wrong" sexually and wanting to kill himself because he felt so alone.⁴⁰

The effects that public opinion and regulation of the entertainment industry and media had on the non-heterosexual population during the McCarthy

Era cannot be overstated; they transcend the 1950s. These teenagers' feelings of worthlessness, coupled with a lack of information and public support, set the stage for the majority of the homosexual population essentially giving up on their lives when the AIDS crisis broke out in the 1980s. The response of the older generation of non-heterosexual Americans to the teenagers' needs helped spur the growth of organizations, such as the Mattachine Society and the DOB, which laid the groundwork for the progress and success of later gay rights movements.

The constant harassment by the police, condescending judgment by the majority of society, discrimination in the laws and policies, and the removal of positive gay role models from the screen and print did break the spirit of a significant portion of the homosexual population, but the sustained injustice to which they were subjected began to gnaw at them. The anger and frustration at being treated so horribly began to build during this time period, ultimately erupting in 1969 in the Stonewall Inn riots when the gay community finally began to fight back. This marked the moment at which the heterosexual oppressors could no longer count on the quiet compliance of this group of human beings with emotions, ideas, and self-worth as they were denied equality and basic civil rights time and time again. What had long been a fragmented attempt at gay rights activism became a unified protest for acceptance and equality. These riots are often cited as the single greatest event leading to

the modern LGBTQ rights movement. This isn't without good reason – since 1969, the American Psychiatric Association has removed homosexuality from its list of mental disorders; unfair laws allowing discrimination based on sexual orientation have been overturned; people who are openly non-heterosexual have held positions of great power and influence; and 19 states have legalized same-sex marriage.

However, it was the activists in the McCarthy Era who started the chain reaction that has guided the movement to where it is today. Their determination to change their situation overpowered the extreme personal risk they each faced. They braved the possibility of being outed and losing their livelihood with each and every step they took. They were strong enough to begin forming organizations, supporting each other, and planning ways to stand up to a society who said they were worth nothing. The activists of this era were able to make real progress and begin to change the way they were treated and viewed by everyone else. Had they not summoned this courage to rebel, the circumstances in which later victories for the LGBTQ communities were achieved would have certainly been less conducive to those changes. These initiatives afforded later activists the inspiration and relative comfort and stability to resist in an environment decidedly less hostile. "It would be hard to imagine a more difficult climate in which to organize homosexuals to fight for respect and equality" than that of the McCarthy Era.⁴¹

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Elliott Carter's *Eight Pieces for Four Timpani*

Brandon Smith¹

Elliott Carter (1908-2012) was one of the most prominent American composers of the twentieth century. He used a "complex, nonserial style characterized by innovations in rhythm and form" that was particularly evident in the late 1940s onward (Burkholder, et al. 942). His *Cello Sonata* and *Eight Pieces for Four Timpani*, written in 1948 and 1950/1966 respectively, were some of the first pieces to use these revolutionary concepts (Carter and Edwards 91). The timpani études, in particular, utilized extended techniques in combination with his rhythmic innovations. Carter's new compositional style in regards to his *Eight Pieces for Four Timpani* has solidified the composition's permanent place in the percussion repertoire.

Preceding the publishing of his *Cello Sonata* in 1948, Carter studied and was compositionally influenced by the "Indian *talas*, the Arabic *durab*, the 'tempi' of Balinese *gamelans* (especially the accelerating *gangsar* and *rangkep*)," and the African music of the Watusi people (Carter as qtd. in Edwards 91). The compositions of composers such as Alexander Scriabin, Charles Ives, and Henry Cowell played a role in his new compositional style (Carter as qtd. in Edwards 91). The effect of World War II is also evident in his compositional style. As Schiff states:

He has spoken of his need at this time, in response to the experience of the war, to

re-examine all aspects of music in order to achieve an emancipated musical discourse; this pursuit led him to a systematic study of rhythm and a reconsideration of both European and American forms of Expressionism. (Schiff)

As early as 1944, Carter began to ruminate in terms of "simultaneous streams of different things going on together rather than in terms of the usual categories of counterpoint and harmony" (Carter as qtd. in Edwards 101). These new ideas derived from his interest with the "phenomenon of musical time and his dissatisfaction with the simple approach to it in much twentieth-century music" (Schiff 23).

What is seen in his music around this time is a "counterpoint of sharply differentiated lines inspired in part by the multilayered textures in the music of Ives, whom Carter knew in his youth," the jazz styles of the 1930s and 1940s that "combined free improvisation with strict time," and the other studies and enlightenments in his life (Burkholder, et al. 943; Carter as qtd. in Stone and Stone 347). Three years of additional composition lessons under the direction of Nadia Boulanger fully involved him in studying strict counterpoint (Schiff). Carter's idea was to write "simultaneously interacting heterogeneous character-continuities" in his music (Carter as qtd. in Edwards 101). This ultimately resulted in the de-

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velopment of 'metric modulations,' first coined and described by conductor and critic, Richard Goldman (Carter as qtd. in Stone and Stone 204). Metric modulations occur when "a transition is made from one tempo and meter to another through an intermediary stage that shares aspects of both, resulting in a precise proportional change in the value of a durational unit" (Burkholder, et al. 942). These metric modulations were written in much of his post-*Cello Sonata* music and are "analogous to the changes of key in a piece of tonal music" (Carter, et al 245). Naturally, two years after, Carter used metric modulations in his *Eight Pieces for Four Timpani*.

In 1950, Carter wrote six études for timpani that were "intended as compositional studies mainly in tempo modulation" as well as manipulation of four-note chords that Carter was implementing into his harmonic palette of the time (Schiff 148). These were titled *Saeta*, *Moto Perpetuo*, *Recitative*, *Improvisation*, *Canaries*, and *March*. The études, using four timpani utilizing only one tuning, were circulated around percussionists in the New York area and performed much to Carter's dissatisfaction (Schiff 148; Wilson 64). In the 1960s, Carter and the Buffalo percussionist, Jan Williams, revised the six études "in order to make them more effective in performance" (Schiff 148). In 1966, following these revisions, Carter wrote two additional pieces, *Canto* and *Adagio*, that utilize extensive pitch changes (Schiff 148; Williams 9). Two years lat-

er, in 1968, *Eight Pieces for Four Timpani* was published as an anthology "with the older ones dedicated to many of the percussionists who played them in the '50s" and the two newer ones dedicated to Jan Williams (Schiff 148). After the 1968 publication, Carter decided, "no more than four of the eight pieces should be performed on any one occasion" (Williams 9). Furthermore, if only some are performed in one concert, it's not crucial to keep the pitches notated in the score. Rather, Carter suggested that the "intervallic relationships between the four notes should be maintained" (Carter as qtd. in Wilson 64). These études challenge the timpanist by using metric modulations, other rhythmic and metrical demands, and several extended techniques.

Throughout the collection of études, the use of metric modulations and difficult rhythmic and metrical passages are prominent. In Carter's own words about *Eight Pieces for Four Timpani*:

The *Eight Pieces*, you see, were written to develop notions of metric modulation as a sort of experiment. Because I then wrote my big *First Quartet* which uses all the metric modulations that you find here in the *Eight Pieces* on a simplified basis. So, this was a kind of sketch for a string quartet - if you can believe it!" (Carter as qtd. in Wilson 65)

Additionally, Carter integrates four-note chords from his string quartet drafts into the timpani études and uses them to bring a "different character to each piece and help to emphasize the

musical expression of each one" (Wilson 65). Given that these are solo pieces, the performer must treat the four notes in the most musical way possible. In an interview Carter mentioned:

The problem with the *Eight Pieces* is phrasing... You know, percussionists are not like pianists who are accustomed to playing linear melodic music. A piece that has only four notes, as most of the *Eight Pieces* do, requires even more care in its phrasing than one that is a bit more elaborate. (Carter as qtd. in Wilson 63)

Oddly enough, Carter made the études more elaborate than just four notes on the timpani.

Following the revisions he made with Jan Williams, Carter was able to add "more varieties of timbre to these pieces" and "make each a more effective performance vehicle for solo timpani" (Williams 8). Carter and Williams experimented with beating spots, stroke types, mallet choices, harmonics, pitch changes/glissandi, and sympathetic resonances (Williams 8-9). The beating spots included the normal striking area, the very center of the head, and a spot close to the rim of the drum; the preferred stroke types included the usual stroke type, dead stroke, rim shots, and hand dampening; the mallet choices consisted of typical timpani mallets for different pieces as well as snare drum sticks, the butts of timpani mallets, and special rattan sticks covered with cloth; a clear method of obtaining octave harmonics was created; pitch changes and glissandi were discussed and integrated into *Canto* and

Adagio, which he wrote for Jan Williams; and sympathetic resonances were notated in *Adagio* (Carter 2-3). All of these aspects of playing were notated in the music and described in the performance notes at the beginning of the collection (Carter). The notation and performance notes were conveyed in such a way that "provides the performer with exactly the right information with which to elicit the desired result – neither over- nor under-notated" (Williams 9).

The eighth movement in the collection, *March*, personifies much of Carter's style of his earlier works. It was dedicated to the New York Philharmonic's timpanist, Saul Goodman, when the entire collection was published in 1968 (Schiff 151). The *March* adheres to the typical dominant to tonic relationship of marches in the tuning of the piece: G2, B3, C3, and E3 (Schiff 151). The tonic to dominant relationship exists in the key centers of C and E. To further establish the division between the two relationships, a good portion of the piece is played with the right hand playing the B and E with the normal felt side of the timpani mallet and the left hand playing the G and C with the wooden, or butt end of a drumstick. This is especially evident in the first A section and the last A' section with the muted drums. In addition to the difference in articulation, the hands are essentially playing at different tempos, thus creating the complex polyrhythms on which the several metric modulations in the piece exist. According to Schiff, the *March* simulates two drummers approaching one another while playing at

different tempos (Schiff 151). The drummers "meet and 'challenge' each other, outdoing one another in virtuosity" then march away at different tempos like before (Schiff 151). This journey of arrival, drum battle, and departure is reflected in the modified ABA' form. The separation and juxtaposition of pitch, articulation, and tempo in the *March* most certainly refers back to the music of Ives, one of his close friends from his earlier years, but also epitomizes Carter's style of the late 1940s.

Carter's influences from around the world and around his place of residence affected his compositional styles throughout the 1940s. Williams knew at the time of the revisions in the 1960s that *Eight Pieces for Four Timpani* were "extremely important additions to the repertoire and destined to become classics of the genre" (Williams 14). Williams was right. Carter's innovative use of metric modulations and extended techniques on timpani has solidified the études as a fundamental performance vehicle in the percussion repertoire. Regardless of Carter's qualms in writing the initial sketches of the études, their revised forms are fascinating percussion pieces that explore rhythm, meter, pitch, timbre, and dynamics (Schiff 148). As a result, Elliott Carter's *Eight Pieces for Four Timpani* remains to be one of the most well-known collections of solo timpani repertoire.

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Provenance of Detrital Sand of the Eutaw Formation in Alabama and Western Georgia: Implications for Late Cretaceous Paleogeography

Don Osborne¹

The Eutaw Formation is a Santonian to Campanian age (~87.5 -83 Ma) stratigraphic unit of the eastern Gulf Coastal Plain, occurring from eastern Mississippi to western Georgia. In western Georgia and central Alabama the Eutaw is divided into the upper Tombigbee Sand Member, and a lower unnamed member. The unnamed lower member of the Eutaw Formation within the study area of eastern Alabama and western Georgia is significantly different in mineralogy and depositional environment than that of the western Alabama upper Tombigbee Member, and is used to differentiate the two. Sedimentary analysis of the lower member of the Eutaw Formation also suggests the strong possibility of multiple terranes as the provenance for these sediments. The variance in the modal mineralogy of metamorphic grains and changes in sedimentary characteristics along the strike of the lower member show that there is a possibility of different transport processes and protoliths for the sediments. This variance in mineralogy also provides possible insight to paleogeography during the time, and paleocurrents at work along the marine facies. This difference provides the impetus to further research which could determine if the lower member is sufficiently different

lithologically to warrant possible reevaluation of the lower member.

Introduction

The Eutaw Formation is a Santonian to Campanian age (~87.5 -83 Ma) stratigraphic unit of the eastern Gulf Coastal Plain, occurring from eastern Mississippi to western Georgia (Fig 1). The purpose of this study is to determine if the Eutaw Formation can be further understood, associated paleogeography better defined, and relationships to sediment sources identified. Because the Eutaw Formation is superpositioned above Tuscaloosa Group sediments, which in comparison are more mature, and consisting primarily of quartz with lesser amounts of weathered feldspars, the wide variety of minerals and relative immaturity of the sediments found in the Eutaw appear to not have been derived through of the Tuscaloosa deposits.

Provenance analysis consists of the study of the sedimentary composition and textures of the lithology of a given geological unit. This analysis considers the initial origin of the detrital sediment through erosional processes of the protolith in the source area, and sediment transport processes. Source terranes of sediments can be identified by the mineral assemblages preserved in lithification. Such assemblages can be identified by non-labile minerals, and also preserved labile minerals. In the case of the Eutaw For-

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mation, the assemblages of concern are metamorphic and igneous minerals characteristic of regional metamorphic terranes and their plutonic elements. The infrequent occurrences of these metamorphic mineral grains when compared to the common occurrences of quartz and feldspathic grains, which comprise the majority of sedimentary formations, are useful as indicators to provenance.

Textural characteristics of sediments such as the grain size distribution, roundness, sorting, and specific gravities, are also indicators to the processes involved with transport and distance. Analysis of the sediment's mineralogies and textures provide constraints on recognition of source areas and lithologies.

This type analysis is not without some caveats however. Chemical weathering processes reduces the presence of labile minerals such as feldspars and amphiboles. Also, reworking of previous lithologies and consequent creation of a heterogeneous mixture of sources further complicates the identities of the protoliths based solely upon mineralogy. Alteration of detrital minerals during diagenesis is also a consideration in determining sedimentary provenance.

General Geology

Geological Setting

The sediments that compose the Eutaw Formation are the result of the erosion and transport of the sediments derived from the ancestral southern Appalachian mobile belt. The

Appalachian mobile belt formed from three or more orogenies that were diachronous along the entire belt. The Taconic orogeny was the first of the major mountain building events in the Southern Appalachians and occurred primarily during the Early and Middle Ordovician period ~480 to 460 Ma and contributed to metamorphism of Grenvillian basement and Neoproterozoic to Early Paleozoic volcanic and sedimentary cover. (Hatcher et al, 2007). This event was subsequently followed by the Acadian and Neoacadian orogenies spanning from Middle Devonian to Early Mississippian ~375 to 330 Ma. The Alleghenian orogeny, which began ~325 Ma, resulted in the Blue Ridge-Piedmont being transported almost 350 km onto the North American platform by ~270 Ma. The result of the three orogenies was a series of uplifts and thrust belts that generally decrease in age easterly and extend geographically westward. These uplifts or 'orogenic highlands' provided a series of crystalline and metamorphic rock assemblages from which sediments of the Coastal Plain were derived. The areas for sediment provenance include the Southern Appalachian foreland and mobile belt, consisting of the Valley and Ridge, Blue Ridge and Piedmont terranes (Fig 2).

The Eutaw Formation was first identified by Alabama State Geologist E.W. Hilgard in 1860, and named for exposures in Eutaw, Alabama. The Eutaw Formation is part of upper Cretaceous strata of the Gulf Coastal Plain (Fig 3). The Eutaw disconformably overlies the Cenomanian

aged Tuscaloosa Formation, and is superimposed across by another disconformable contact with the Campanian aged (83.6 to 72.1 Ma) Blufftown Formation (Frazier 1997).

The Eutaw's deposits formed in a tidal and shallow marine environment, while the Tuscaloosa's are non-marine. This is consistent with the eustatic sea level changes and marine transgressions that marked the Cretaceous Period (Fig 4). These restraints place the sediments of the Eutaw to have been deposited, according to Mancini and Puckett, "during an initial rise in base level and increase in accommodation during the middle Coniacian to middle Santonian that post-dated a fall in base level and regional unconformity" (2005).

The Eutaw Formation is divided into the unnamed lower member and an upper member named the Tombigbee Sand Member (Mancini, Puckett, Tew & Smith, 1996). The Tombigbee Sand Member is characterized by tabular and cross-bedded sands and sandstones that are weakly lithified (Mancini & Soens, 1994). Within the study area of Western Georgia and Eastern Alabama the lower member is observed to comprise two conformable units. According to Marsalis and Friddel (1975), "The basal unit is a coarse grained, feldspathic, burrowed, cross-bedded quartzose", while the upper unit "comprised of light gray to olive black, micaceous, carbonaceous, fossiliferous, silty sand, sandy silt and silty clay layers". The exposures of the Eutaw Formation in Chattahoochee and Muscogee coun-

ties of Georgia consist of weakly consolidated coarse sands and fine fossiliferous mudstones and shales. In eastern Alabama the exposures in Russell, Lee, Montgomery and Elmore counties are also composed of weakly consolidated coarse sands and fine clays, and thin to thick beds, found in Russell county, of a loosely lithified coquina comprised of Cretaceous aged *Ostrea cretacea* shells.

The paleoenvironment of the study area of the Eutaw Formation consists of tidal nearshore environments containing barrier islands as evidenced by low-angle cross-bedded medium-fine sands (Fig 5). Lower shoreface evidenced by hummocky crossbedding and fossiliferous bioturbated fine sands, upper shoreface facies containing *Ophiomorpha* burrow trace fossils (Frazier, 1987). This member of the Eutaw is also fossiliferous with the presence of *Hardouinia clypeus*, an upper Cretaceous echinoid.

Previous work by Frazier (1987, 1996) recognized the study area as an incised valley filled with estuarine deposits. The Eutaw Formation is composed of at least four related facies within the western Georgia region, tidal sands, proximal lagoon, distal lagoon, and a bayhead delta (Fig 6). The tidal sands of the area show reactivation surfaces and cross-bedding consistent with tidally controlled processes. Frazier and Taylor (1980) observed that a tidal-delta complex model is strongly supported.

Methodology

In order to allow for differentiation of paleogeography, paleocurrents, and source terranes of the Eutaw Formation, a mineralogical analysis of the detrital sediments was performed in order to link them to specific geologic terranes. This was accomplished by collection of representative samples of sediments from multiple exposures of the Eutaw Formation through West Central Georgia and Central Alabama. Sample preparation was performed prior to sieving and specific gravity separation. A visual analysis and volume calculations were performed to determine modal mineralogy of each sample.

Field Work (sampling)

Twelve locations that contained surface exposures of the Eutaw Formation were identified, sixteen stations created, and visited to collect representative samples of each exposure. The exposures of the Eutaw Formation that were sampled followed the observed East-West strike by previous work done by Frazier, King, and others. (Frazier 1987) (King, 1990). Each sample was collected by hand, labeled, and stored in clean unused sample bags. All samples consisted of weakly to poorly lithified micaceous, subarkosic sand, with the exception of a friable fossiliferous quartz arenite with a carbonate cement recovered at station 10A (Fig 7).

Sampling preparation

Each sample was divided into working samples to be used for analysis, and a unaltered field reference sample. The analysis samples were wet-

sieved with clean water using a $<4.0 \Phi$ sieve screen to remove silt and clay sized sediments that might interfere later with specific gravity separation processes. The washed samples were then oven dried at 150°C for a period of 24 hours to remove moisture content prior to weighing and sieving.

Grain size and distribution analysis

Each sample was measured out to 100 g (± 0.01 g) portion to be used in sieving. The samples were sieved through screens between -2.0Φ to 4.0Φ at $\frac{1}{2} \phi$ intervals. A Humboldt Manufacturing model H-4325 motorized sieve shaker was used at run time of 10 minutes per sample. Each sample was then recorded by individual Φ weight, and also cumulative sample weight. The average sieving error in this process was less than 0.3% of initial sample weight prior to sieving. The data was entered into Gradistat Version 4.0, an Excel based program designed to provide analysis data for sieved sediments (Blott and Pye 2001).

Microscopic Analysis

Each sample was observed using a Fisher Scientific Stereomaster microscope model # 12-562-14 with a magnification range of 15X to 45X to determine grain form and shape. Initial visual identification of mineralogy and modal compositions were performed in this method, subject to verification by further testing methods.

Density Separations

Each sample was subjected to heavy mineral

separation by specific gravity in which samples were prepared using grains $< 1.0 \Phi$ in size to ensure passage through the apparatus. An average sample size of 25 g was used. The separatory apparatus consisted of a 500 mL separatory funnel with stopcock mounted on a ring stand, a funnel containing #1 filter paper with particle retention of $\sim 11\mu\text{m}$ and larger, and a 250ml beaker to collect the heavy liquid used for separation after passage through the filter. All glassware was washed using a detergent, a distilled water rinse, and a final acetone rinse to remove any possible contaminants. The apparatus was then dried using compressed air and allowed to air dry for >2 hours before adding the heavy liquid to prevent alteration of specific gravity of the liquid by any residual acetone. Methylene Iodide (MeI) was chosen as the heavy liquid due to the specific gravity range of 3.30 – 3.32 @ 20 °C. Due to the toxicity of the MeI, universal precautions were used by employing proper lab procedures, personal protective equipment, and all work conducted under a fume hood.

After each separatory funnel was filled with 100 mL MeI, a 25 g sample was loaded into the funnel and agitated to minimize clumping of grains, thoroughly wet the sample, and also break surface tension of the liquid to allow grains that had a SG > 3.32 (Fig 8) to settle through the liquid. Each sample was given a minimum of 12 hours for separation to occur, after which the separatory funnel was decanted capturing the heavy component and then the light components through

separate filter papers. The heavy and light components then were given an acetone wash to remove any remaining MeI and transferred to a convection lab oven set at 125 °C for a minimum of 4 hours to drive off any volatiles remaining in sample prior to handling for subsequent analysis.

Visual analysis

Each separated sample, both heavy and light fractions, were observed using a Fisher Scientific Stereomaster microscope, and also a Motic petrographic microscopic in both plane polarized and non-polarized light. Visual identification and confirmation of mineralogy of both the light and heavy fractions of the samples performed in these methods.

Volume Calculations

A modal composition of each sample was visually determined by the use of a Fisher Scientific Stereomaster microscope at 10X and percentage diagrams to arrive an estimated percentage by volume of each mineral species present.

Results

Most samples classify as sublitharenites (Fig 9) as plotted on a QFL ternary diagram, according to Folk classifications. All samples classified as a probable recycled orogenic provenance (Fig 10) as plotted on a QtFL ternary diagram. Grain characteristics remained consistent in regards to roundness and sphericity. All samples showed angular to subangular roundness, and an average sphericity ranging between low to medium.

In distribution, the samples showed an alternation from bimodal to modal distribution at each station with no clear pattern observed. Mean particle diameter (Φ size) showed an overall increase of \sim one order (Fig 11), as sample stations progressed westward, as the sediment diameters decreased from very coarse (\sim 1 mm) to coarse/medium sand (\sim 0.5 mm).

The degree of Sorting (σ) showed an overall decrease as sampling stations moved westward, decreasing from moderate sorting to moderately well sorted (Fig 12).

Mean grain size of heavy minerals was \sim 2.5 Φ , while mean grain size of samples overall was \sim 1.07 Φ . All samples exhibited a strongly fine skewness, with the exception of sample #10B which was strongly coarsely skewed (Fig 11).

Modal mineralogy

In distribution, heavy mineral percentages as a fraction of the whole in samples increased from East to West along strike of the Eutaw Formation. Station 9 normalization is effected by the discarding of biogenic material which consisted of \sim 50% Cretaceous bivalve shell fragments (Fig 13).

In distribution, heavy minerals species in the samples increased from East to West along strike of the Eutaw Formation. There appears to be an observable change in metamorphic facies between stations 9 and 10B (Fig 14). This coincides geographically with the division with the Coosa River and the Chattahoochee River Basins. Par-

ticularly worth noting is kyanite which only appears in the western end of the study area, stations 11A through 12B. Kyanite only appears amphibolite facies and in this study could be used as a separation of provenance indicator.

Discussion

Barrovian index minerals

Since the accessory minerals analyzed in this study are metamorphic they can be used as a tracer back to the original terranes they are derived from. The minerals also help define areas of possible provenance change along the Eutaw Formation. The index mineral species chosen to use for analysis were the Barrovian index minerals. The Barrovian metamorphic zones of minerals are the result George Barrow's observations of the Highland Boundary fault of Scotland during the early Twentieth century Barrow's analysis of pelites in the region showed that the mineralogy of the pelites reflected the protoliths from which they were derived. Barrow noted that the degree of metamorphism of the protoliths could be indexed based upon the first appearance of index minerals in each successive higher grade of metamorphism. The Zones are marked upon the first appearance of the following metamorphic minerals: Chlorite, Biotite, Garnet, Staurolite, Kyanite, and Sillimanite. An index mineral can often persist into higher zones of metamorphism and should not be used to define the zone if a higher grade mineral is present.

Based upon Barrow's work A. Miyashiro established in 1961 that differing metamorphic terranes also possessed specific facies series associated with each terrane. A facies is an assemblage of minerals that correlate with the bulk chemical composition of the rock, and the pressure and temperature conditions that the minerals are formed in. While each facies series does not indicate a singular rock type, it does cover a specific range of chemical compositions. This association can be used to determine the chemistry of the protolith prior to metamorphism. These facies are divided into nine assemblages: Zeolite, Prehnite-pumpellyite, Greenschist, Amphibolite, Granulite, Blueschist, Eclogite, Hornfels, and Sanidinite. Within the study area the most likely proximal source terranes in Alabama and Georgia for sediments of the Eutaw include lower greenschist facies rocks of the Talladega belt, middle to upper amphibolite facies rocks of the eastern Blue Ridge and Piedmont terranes, and the Pine Mountain window containing granulite facies rocks of locally present Grenville basement and middle to upper amphibolite facies rocks of basement cover sequences.

Conclusions

The analysis of the sediments from the Eutaw indicates the strong possibility that multiple source terranes provided the mineral fractions that compose the eastern portion of the formation. The Eutaw is currently divided into two members, the upper member Tombigbee Member, and the lower unnamed member which was

the focus of this study. The basis for the distinction of the Tombigbee has been the mineralogy, sedimentary characteristics, depositional environment and fossils. The lower unnamed member's variance in mineralogy (Fig 14) along the study area indicates a possibility of multiple sources delivering sediments to the Eutaw Formation during the Cretaceous Period. The basis for this is as follows: the index mineral assemblages are such that the provenance point towards two terranes that are contiguous within the Piedmont Province of the Southern Appalachians. The terranes to consider based upon mineralogy are the eastern Blue Ridge Belt, and the Pine Mountain window. Since the sediments analyzed are relatively immature in characteristics with regards to transport distance, these terranes are proximal to deposition and should be strongly considered. In the light component a possible mineral to be used for constraint of source terrane is muscovite. Since muscovite is present in all stations and some dating work has already been done in the Uchee and Pine Mountain terranes, dating comparison of the samples could yield correlation with the protolith ages. Dating of muscovite along the Barletts Ferry and Goat Rock Fault zones of the Uchee and Pine Mountain terranes constrict the cooling ages of the grains to $\sim 287\text{-}277$ Ma (Stetenpohl, et al, 2010).

Meanwhile, U-Pb dating of zircon in metagraywacke units of the Eastern Blue Ridge Wedowee and Emuckfaw Groups suggests crystallization

ages of a volcanic protolith at ~474 Ma (Tull et al., 2012). In consideration of the two dating results it would suggest dating of muscovite and zircon of the study area is warranted as it could help recognize which protoliths provided the sediments for the Eutaw Formation.

Other characteristics of the samples also suggest differing depositional environmental energies, due to the mean sorting and mean grain size transported. This could be explained by fluvial processes of different streams with dissimilar provenance sources. The current accepted model for the paleogeography of the Eutaw Formation is one of an incised valley with estuarine deposits and a series of barrier islands (Frazier 1987). The results of this research support the current model and possibly expand on the nature of the processes that formed the region. The minimum critical current velocity for the mean grain size of the samples increases from ~20cm/sec to ~35cm/sec on the eastern end of the study area, pointing to less competent stream processes. One possible consideration would be that the eastern portion of the Eutaw received sediments transported to the shore by smaller fluvial sources, experienced westerly longshore transport, and then transport into the estuary by tidal flow. This fits in well with the tidal dominate forms that are already observable within the Eutaw. While west of the Eutaw longshore currents and transport move sediments westward, delivered by the drainage basin containing the incised valley. If using the assumption that the

Coosa and Chattahoochee drainage basins existed in similar forms during the Cretaceous then this model fits well within existing data and findings. This model gives a plausible explanation to the change in species and modal percentages found in the samples analyzed. A contemporary example would be the Chesapeake Bay estuary in which multiple sediment transport paths are observed.

Figure 16 shows the Chesapeake Bay and indicated transport paths, of note are the tidal dominated currents at the inlet. This gives an extant example of how sediments of the Eutaw Formation could have been influenced by multiple transport processes before final deposition.

The Chesapeake Bay exhibits many of the same characteristics observed in the Eutaw Formation, multiple sediment sources, multiple fluvial transport systems, and a tidal influenced estuarine system with both high energy and low energy lagoonal facies.

In the case for the Eutaw Formation sediment delivery from source terranes can be shown by the black thin arrows in figure 17, while the tidal influence and longshore transport is expressed by the bold blue arrows.

Since both the variance of both mineralogy, and minimum stream processes along the study area is noteworthy, it is suggested that further research be performed to help define both the provenance of the sediments, and also build stream models. This further research would help

fill in the paleogeography of the Eutaw Formation.

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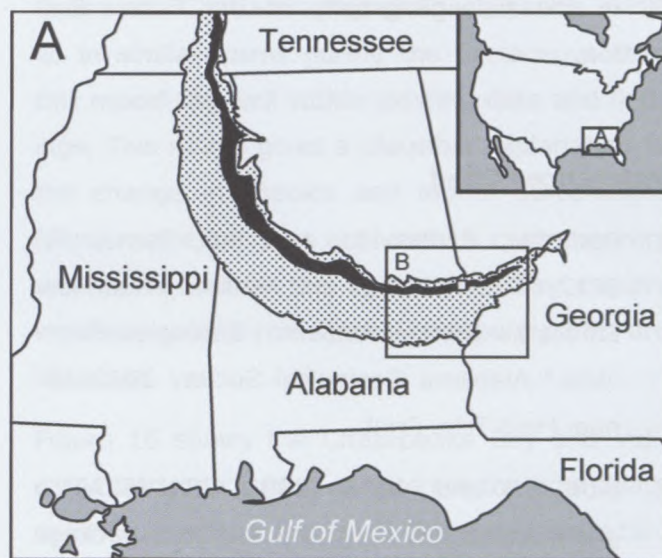


Figure 1. Eutaw Formation outcrop (A), Study Area (B), (Savrda, 2003).

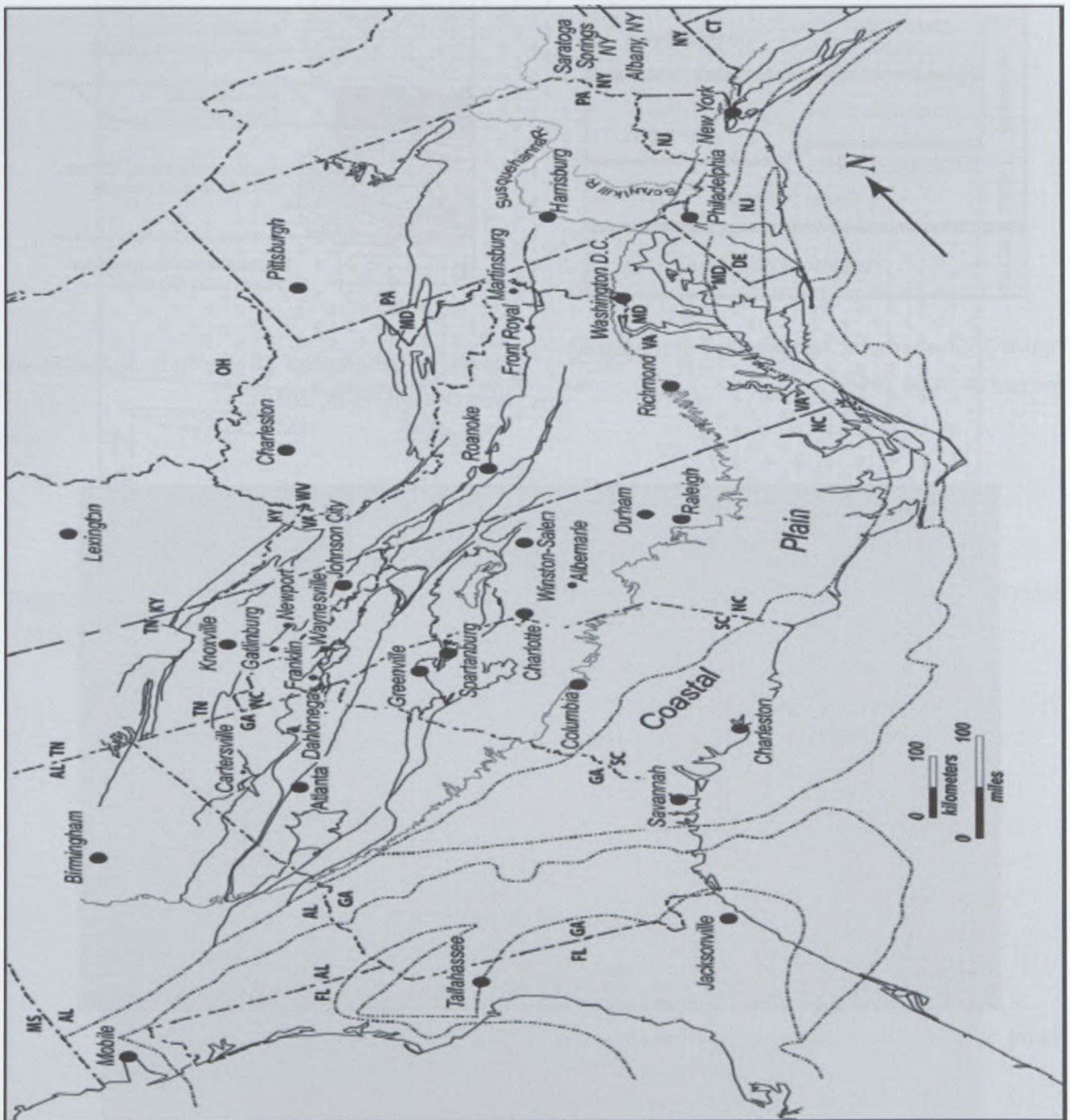


Figure 2. Tectonic boundaries of the Southern Appalachian in relation to Coastal Plain (Hatcher et al, 2007).

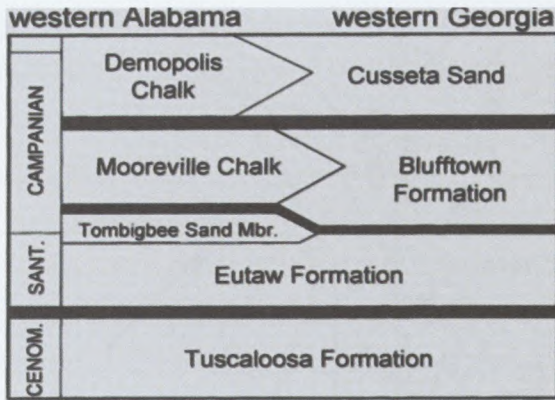


Figure 3. Stratigraphic relationships of the Eutaw Formation (King 1990).

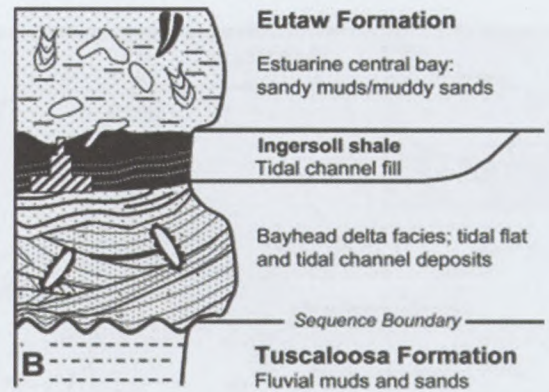


Figure 4. Generalized Stratigraphy of the Study area (Knight, et al, 2010).

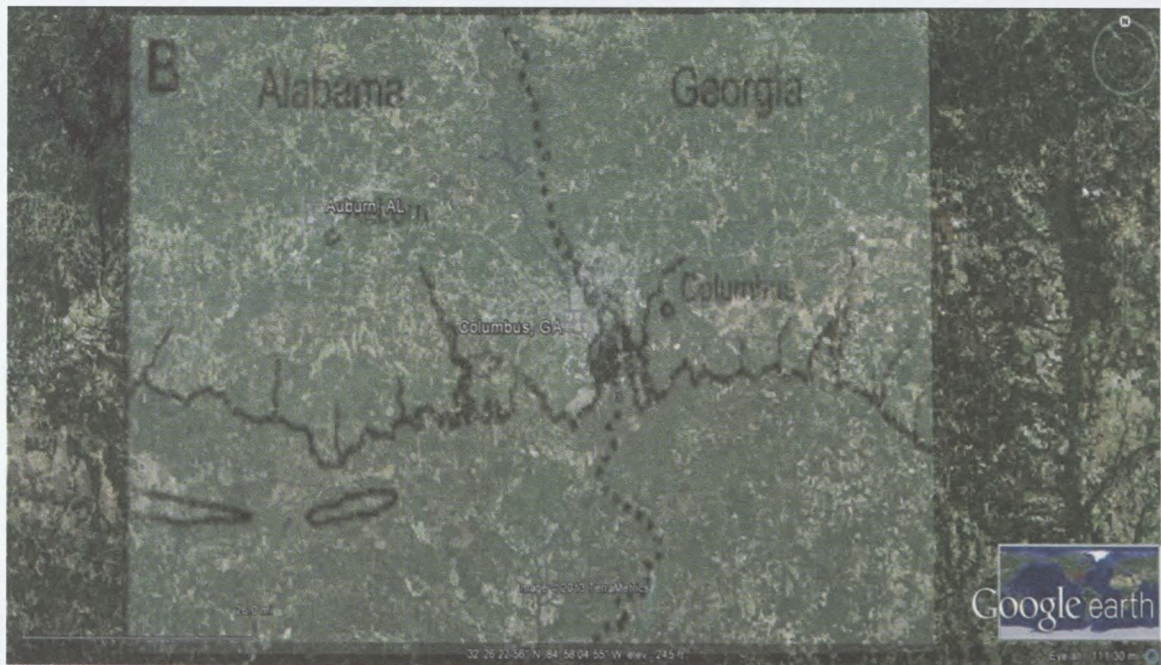


Figure 5. Paleoshoreline imposed over present day geography (Google Earth, 2013).

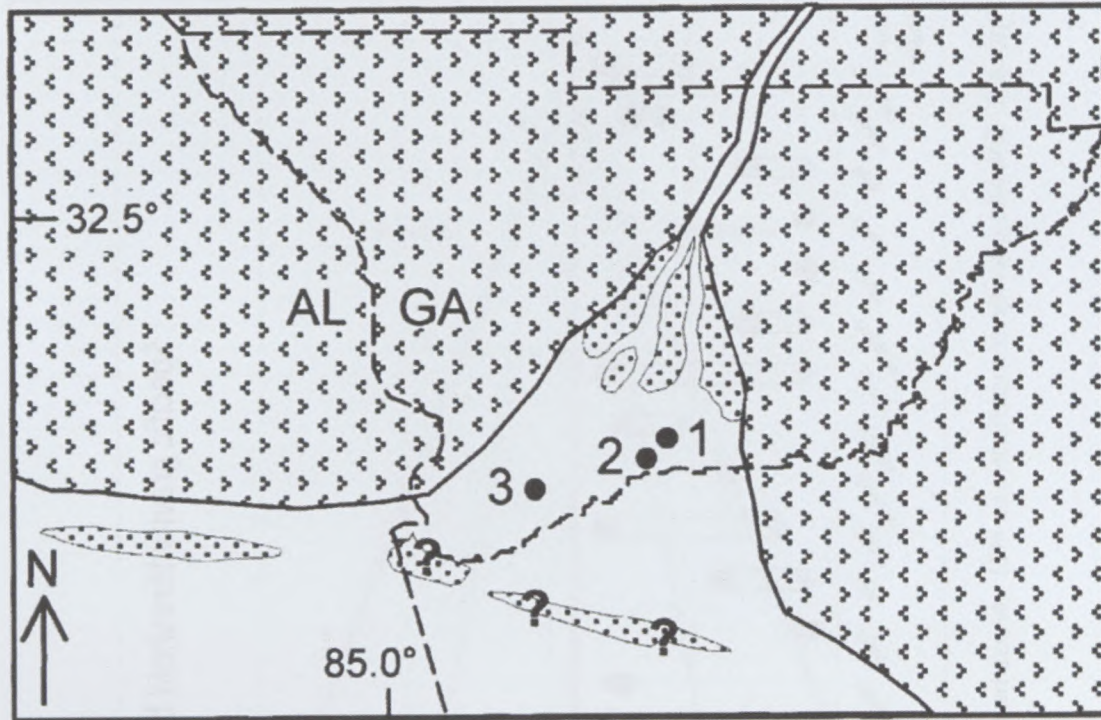


Figure 6. Paleoenvironment of Eutaw Formation along eastern Alabama and western Georgia (Frazier 1996).

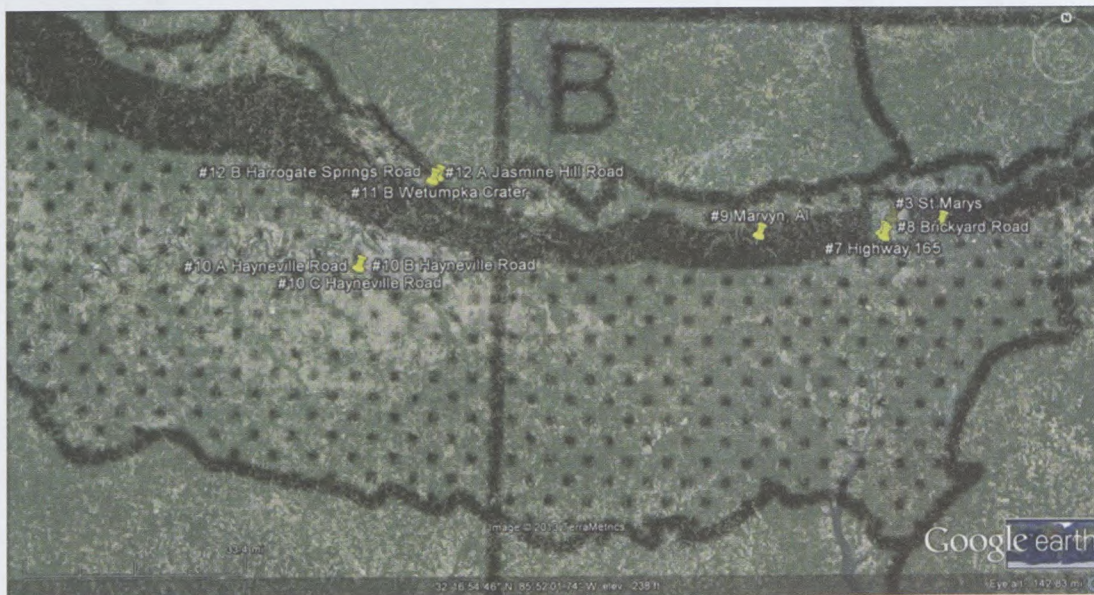


Figure 7. Station positions along the study area (Google earth, 2013).

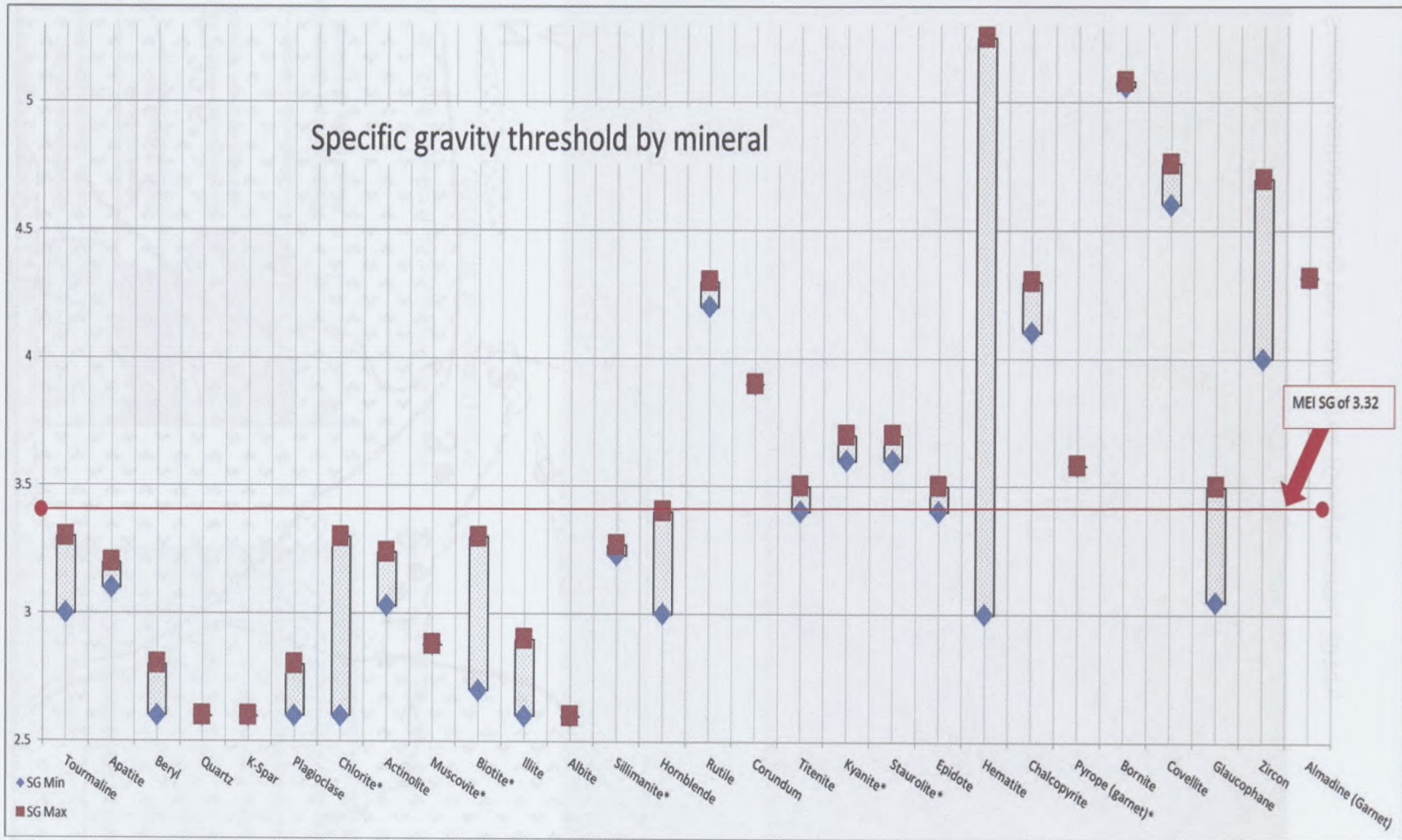
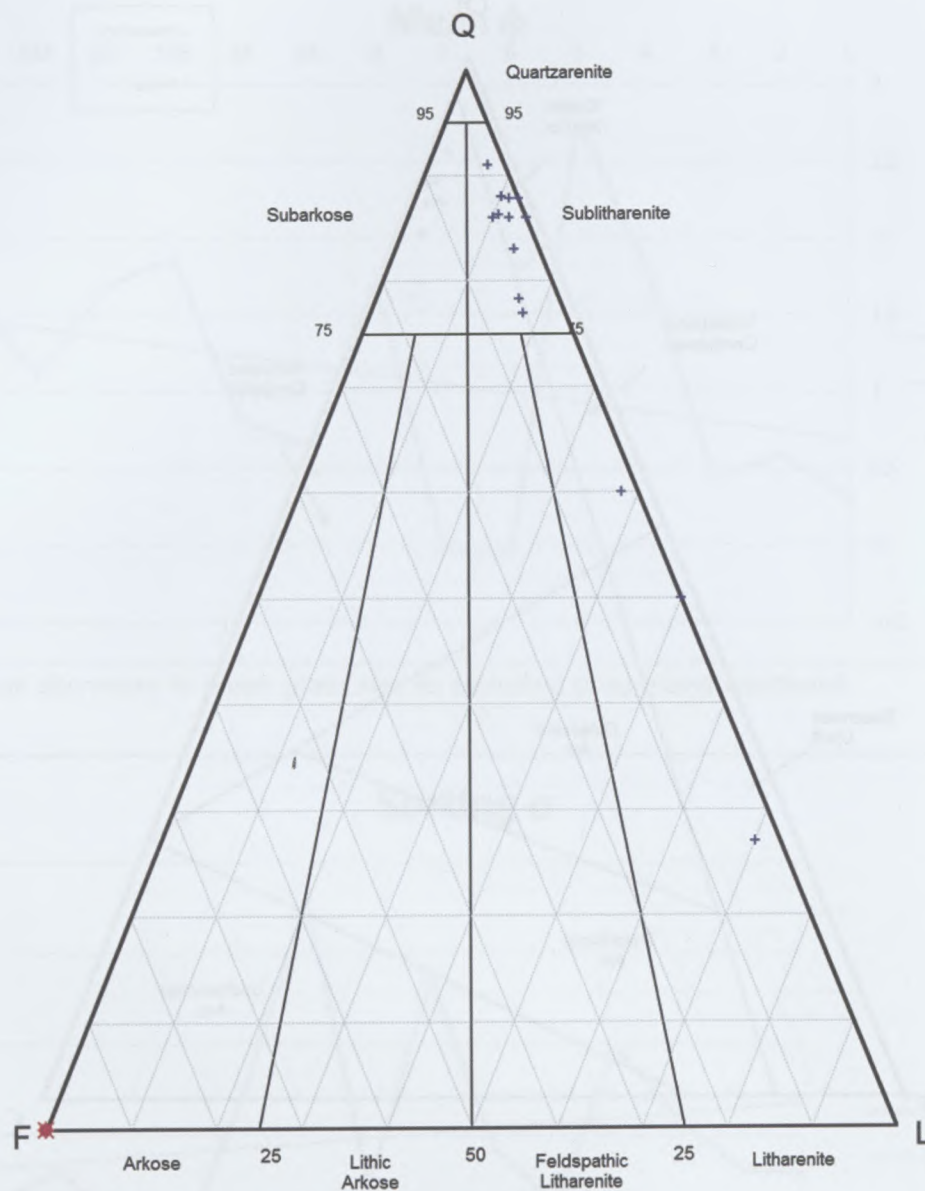


Figure 8. Specific gravity comparisons to MEI versus heavy minerals, *indicates targeted species.



Sandstone Classification (Folk, 1980)

Figure 9. QFL of samples (Kalid 2003).

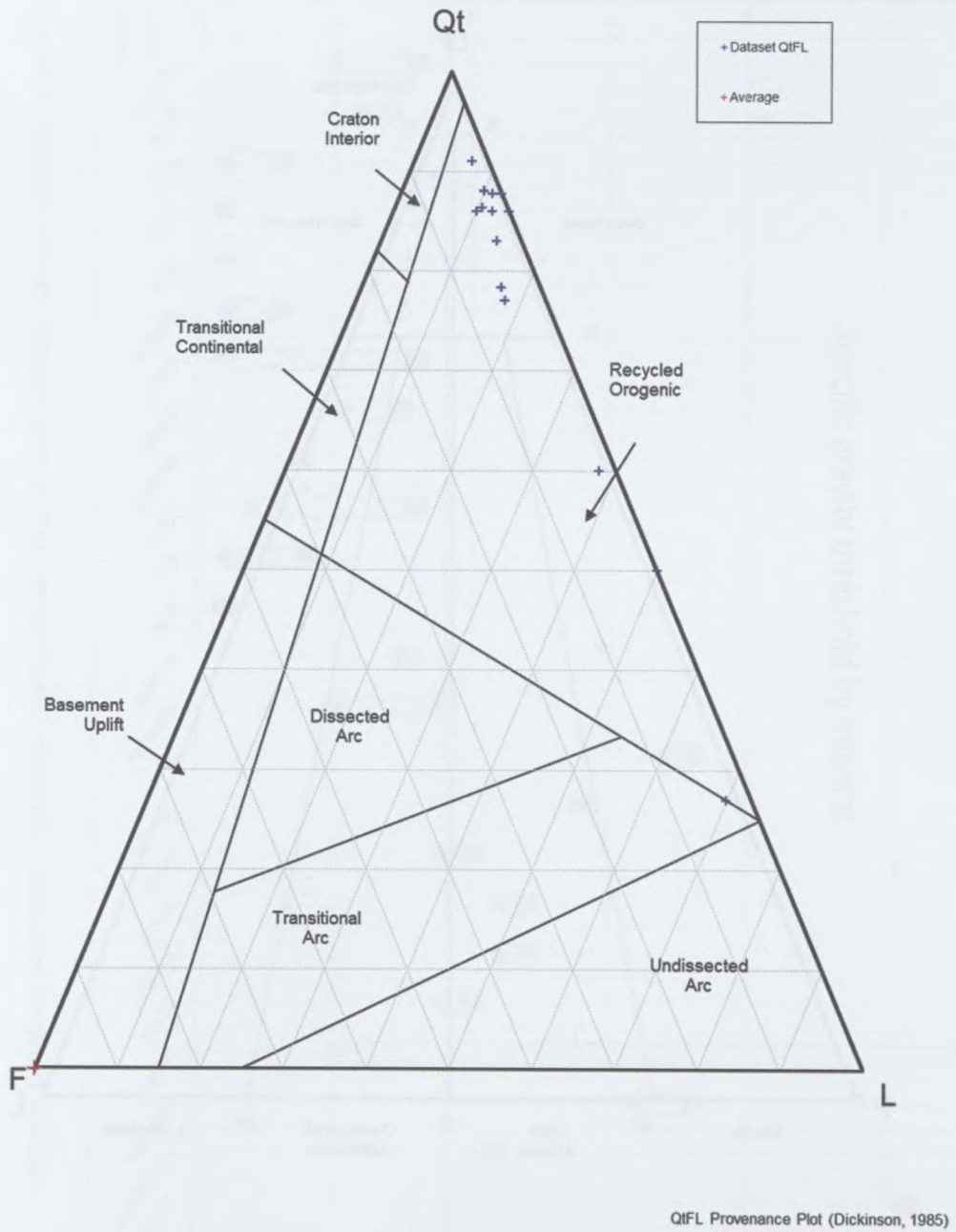


Figure 10. QtFL of samples (Kalid 2003).



Figure 11. Overall decreases in mean grain size as sampling progressed westward.

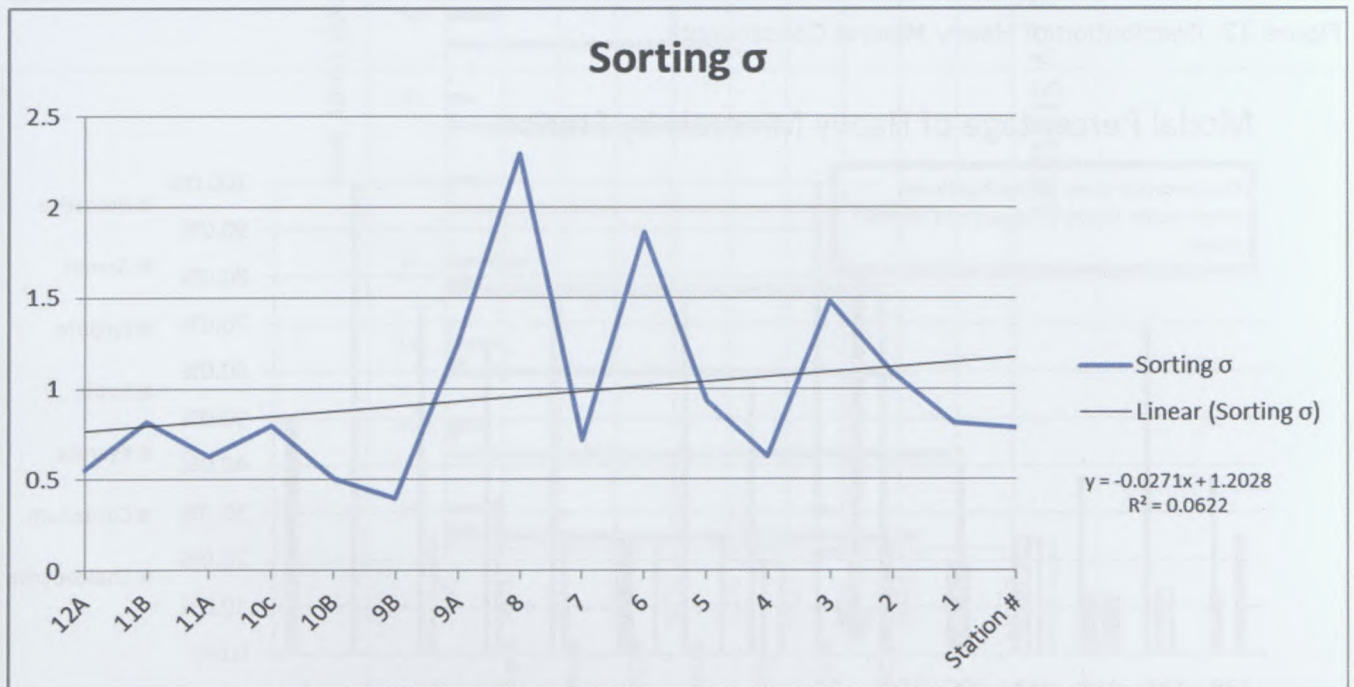


Figure 12. Samples show a lessening of sorting westward.

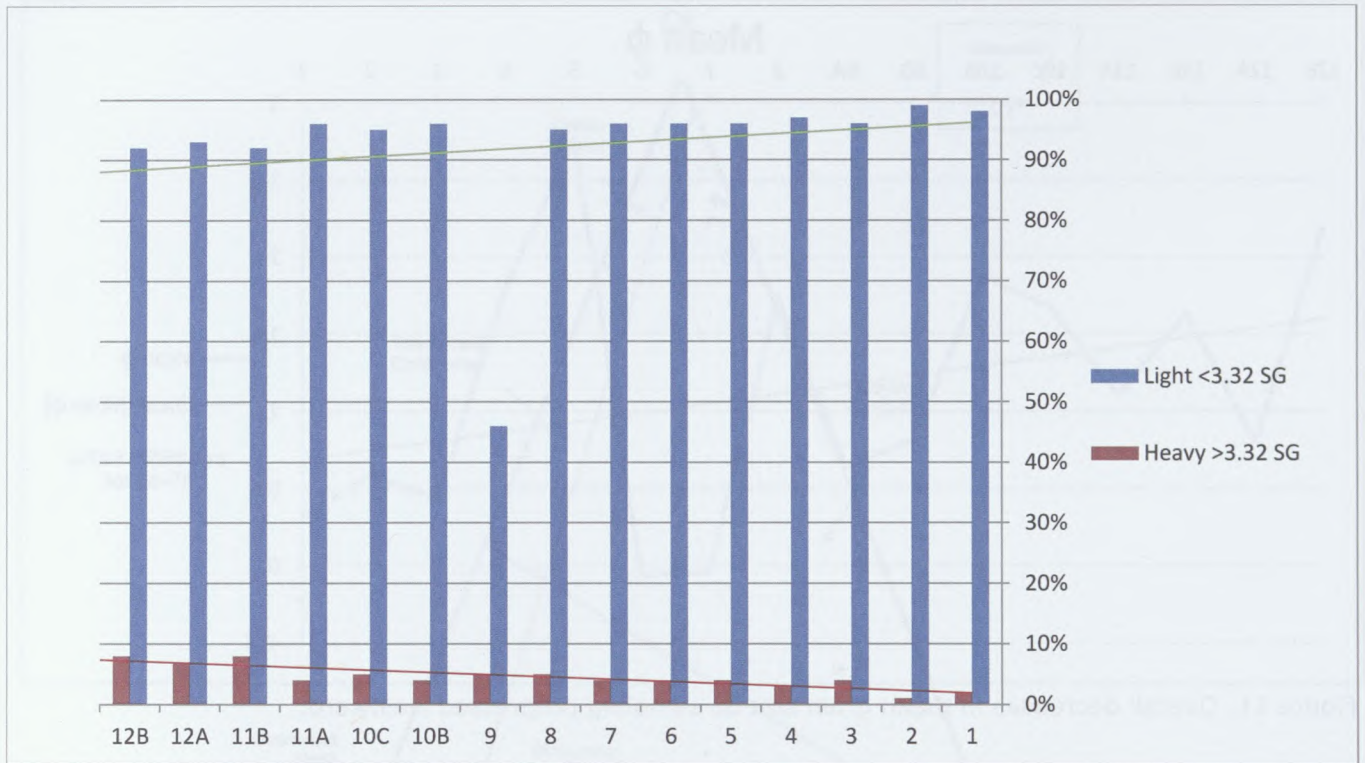


Figure 13. Distribution of Heavy Mineral Constituents.

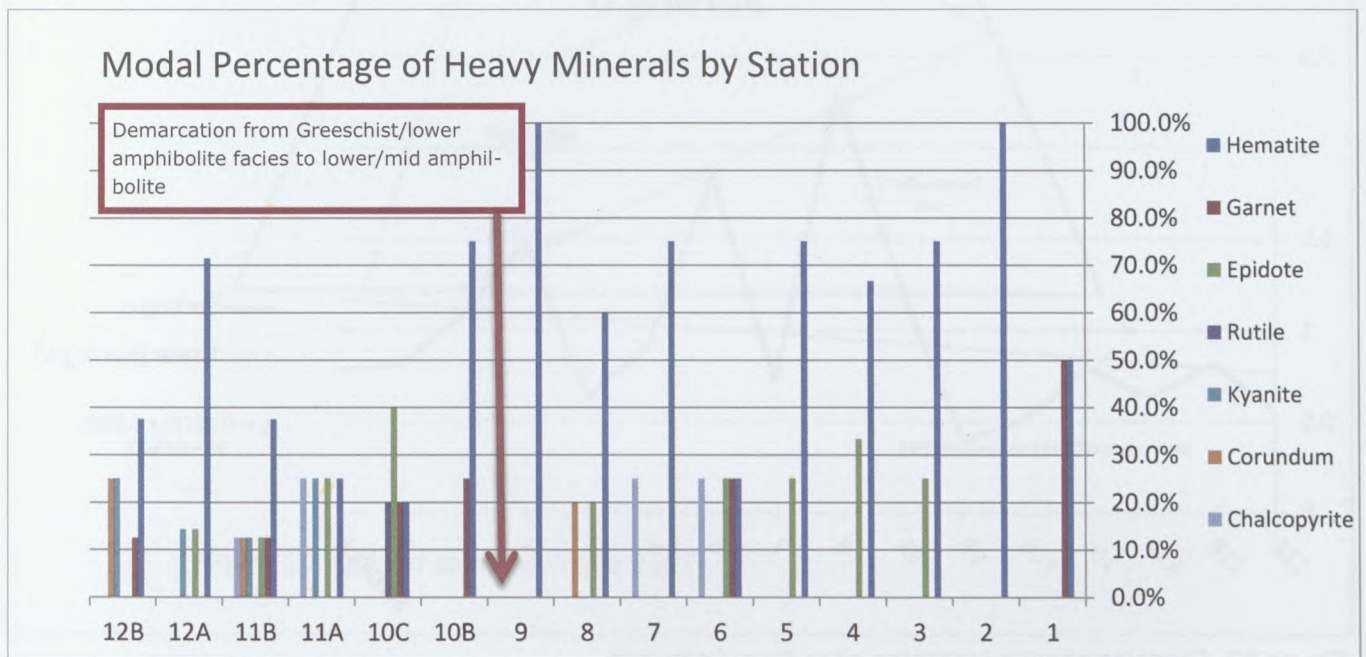


Figure 14. Mineral modal percentages by species and station.

Modal Percentage of Light Minerals by Station

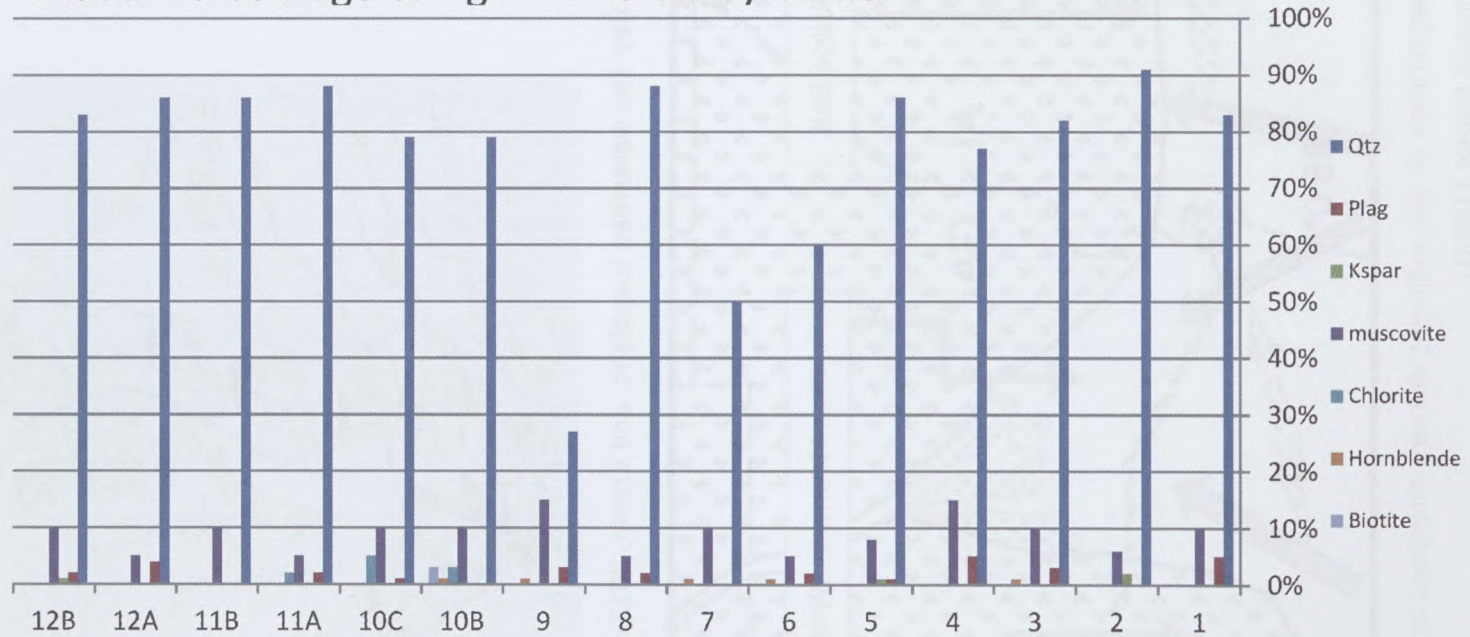


Figure 15. Modal distribution of light minerals (<3.32 SG) along study area.



Figure 16. Chesapeake Bay and watershed (Langland and Cronin, 2013).

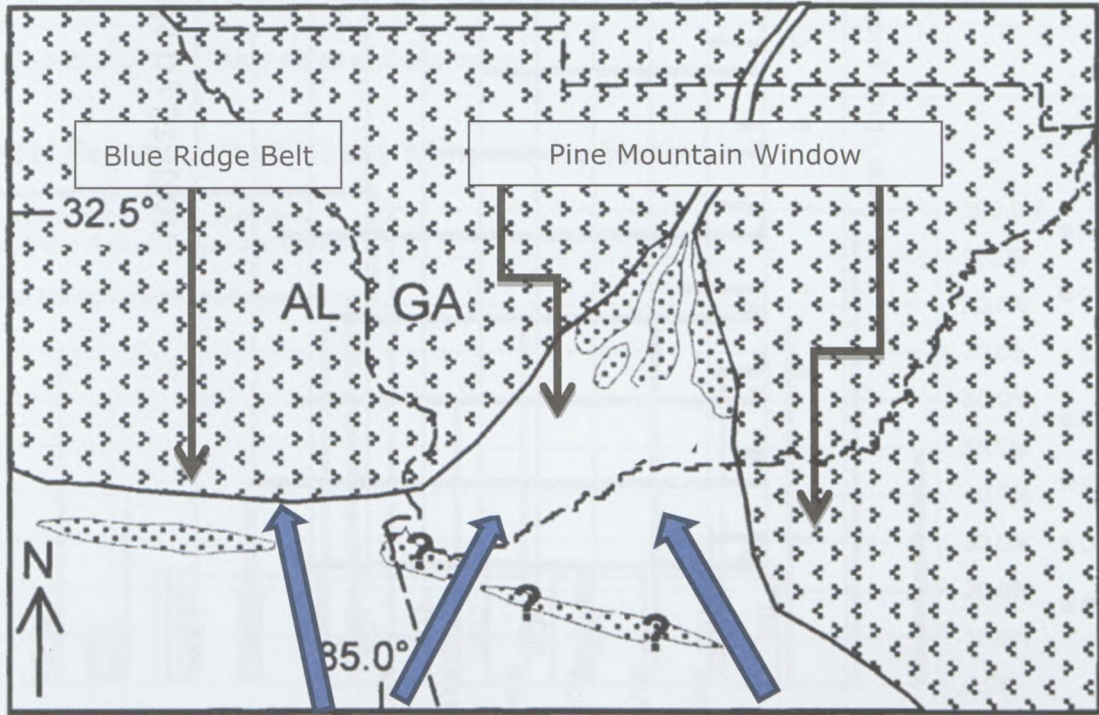
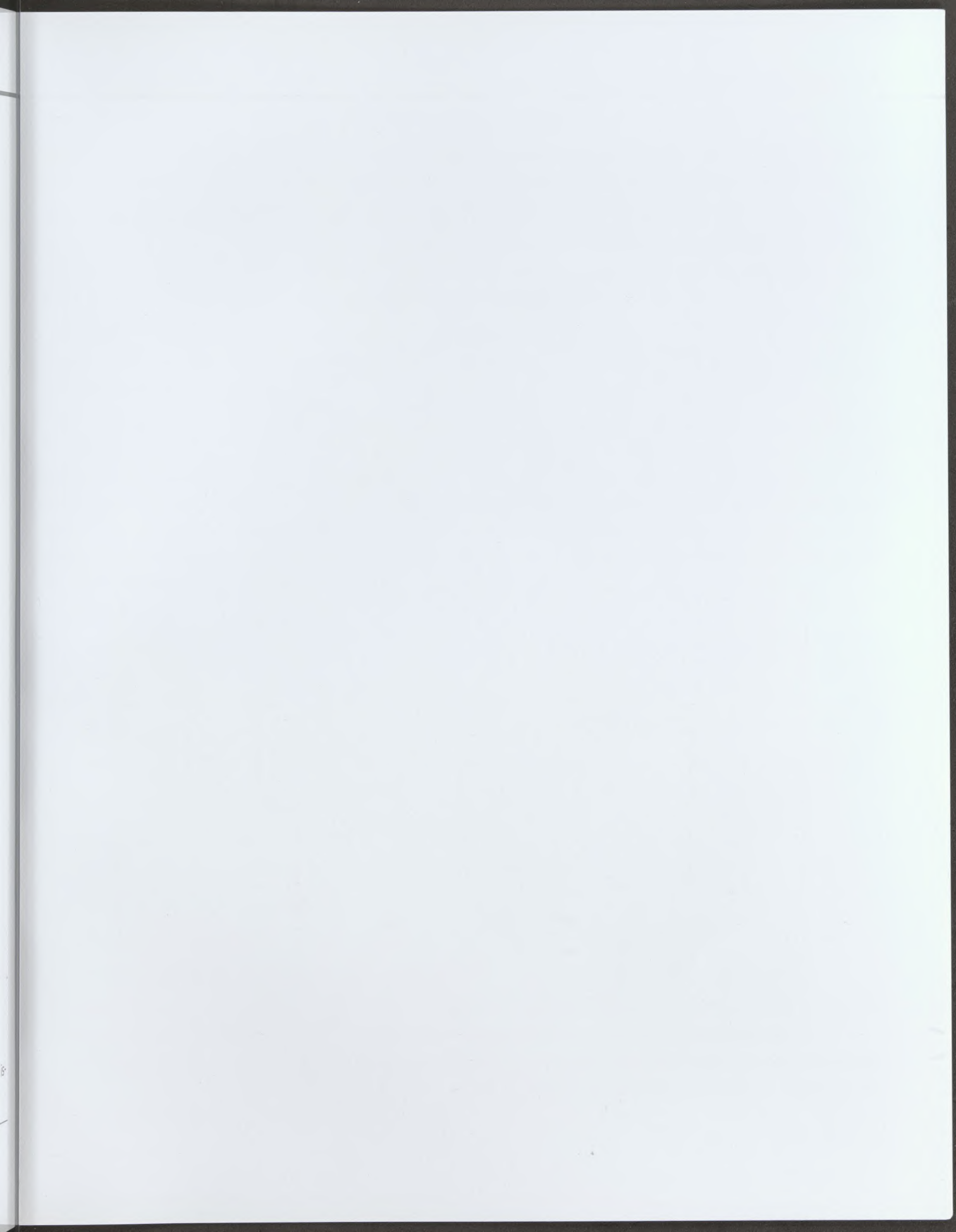


Figure 17. Possible interpretation of the sediment delivery directions and tidal influence on barrier island complex (original image Frazier (1996)).





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