

Mapping the Buchanan Vote Escarpment¹ In Palm Beach County, Florida

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¹ An escarpment is “a long cliff or steep slope separating two comparatively level or more gently sloping surfaces and resulting from erosion or faulting.” *Webster’s New Collegiate Dictionary*, 1980. We show in this paper that the faulting occurred at Palm Beach County’s boundaries, and it was the result of the now infamous butterfly ballot.

INTRODUCTION

In the aftermath of the 2000 presidential election, many observers viewed the potentially confusing butterfly ballot in Palm Beach County as one of the factors that took away more than enough votes from Al Gore to swing Florida and the national election to George W. Bush. While the court cases have been settled, the effect of a flawed ballot design in a single county is still open to debate. In this paper, we present maps that graphically illustrate the impact of ballot form on the number of votes counted for Reform candidate Pat Buchanan. In another paper,² our collaborators show that the 3,407 votes for Patrick Buchanan in Palm Beach County was extraordinarily high and unexpected, that it was the result of ballot form, and that it was greatest in precincts with high Democratic registration and substantial support for Al Gore. That paper shows that 2000 to 2400 of the Buchanan votes were almost surely Gore supporters who mistakenly punched their ballot for Buchanan. The anomalously high numbers of mostly unintended votes Buchanan received in Palm Beach County become even more obvious in this paper when we map the results by precinct.

DATA

In Palm Beach County, only those voters who went to the polls to vote on Election Day used the ballots with the now infamous two-page butterfly design, and absentee voters used a ballot without the basic defects of the butterfly ballot. As a result, the results of absentee voting can serve as a very good control group for what would have happened without the butterfly ballot.³

The most detailed voting results available in the U.S. are precinct-level returns. We obtained precinct-level vote totals for Palm Beach and the counties surrounding it (Broward, Martin, St. Lucie, Okeechobee, Highlands, and Hendry) from the counties' Supervisors of Elections, either from their web site or directly from their offices. These returns list the number of votes counted for each presidential candidate separately for each precinct in the county. The election returns also indicate the number of absentee votes for each candidate, although absentee returns are typically organized into units much larger than precincts. In fact, for the small counties (Glades, Hendry, Highlands, Martin, Okeechobee, and St. Lucie),⁴ the absentees are reported for the whole county. Only Palm Beach and Broward⁵ with much larger populations report absentees by smaller areas.

Because both Palm Beach County and its neighbor to the south, Broward County, tallied absentee votes by ballot style, we can compare detailed election results for election-day and absentee votes in these two counties. In Broward there were 88 such ballot styles and 106 in

² "Evidence of Excessive Buchanan Vote Share in Palm Beach County, Florida," by Jonathan N. Wand, Kenneth W. Shotts, Jasjeet S. Sekhon, Walter R. Mebane, Jr., Michael C. Herron and Henry E. Brady, presented at the Annual Public Choice Society Meeting 2001 March 9-11, San Antonio, Texas.

³ Absentee voters and Election Day voters are somewhat different in Florida with absentee voters typically more conservative. In Palm Beach County, for example, the Election Day vote was 63.2% for Gore, 34.3% for Bush, and 0.85% for Buchanan. The absentee vote was 54.2% for Gore, 44.3% for Bush, and 0.23% for Buchanan. Note that the absentee voters were more likely to vote for Bush, but, quite surprisingly, less likely to vote for Buchanan which is another indication of the impact of the butterfly ballot.

⁴ In the November 2000 election, the total votes for President in these counties were: Glades (3290), Hendry (8004), Highlands (34,500), Martin (60,591), Okeechobee (9689), and St. Lucie (76,388).

⁵ In the November 2000 election, the total votes for President in these counties were: 564,586 in Broward and 268,945 for Palm Beach.

Palm Beach.⁶ These ballot styles represent the number of unique combinations of state and local offices and ballot measures. For example, one area may be in the same congressional, state senate, and school board districts, and therefore require a slightly different combination of offices listed on the ballot than a nearby area that lies in another school board district.

These ballot styles are associated with one or more election precincts so they can be mapped onto the precincts. To determine the correspondence between geographic precincts and absentee ballot style numbers, we obtained an absentee conversion chart from the office of the Broward County Supervisor of Elections. This conversion chart lists which ballot styles are used in each of the 609 precincts in Broward. We created a similar conversion chart for the 531 precincts in Palm Beach by using the precinct-absentee district crosswalk available on the county's web site in combination with the lists of absentee ballot styles for different state and local offices and measures.

To create maps of Buchanan support by precinct for the counties around Palm Beach, we first needed a precinct map of the state. The Florida State Legislature provides just such a map on its web site in the form of a precinct shapefile,⁷ a format that can be opened by a specialized mapping program such as MapInfo. Once read into a mapping program, this map file displays all of the precincts in all of the counties in Florida as of 1998. Of the counties we include in our map, most changed only a relatively small number of precinct boundaries. Palm Beach created and deleted a few precincts, but Broward did not change any.⁸ We also obtained a separate shapefile of the counties of Florida created by Jon T. Kilpinen.⁹ This file contained voting results by county for the November 7th election, so we did not need to add additional data.

METHOD

We matched the data from Election Day returns to the State Legislature's 1998 precinct map to create a picture of Buchanan support in Palm Beach and surrounding counties. We also updated the precinct lines of Palm Beach and Martin County (located just to the north of Palm Beach County) to reflect changes made since 1998.

As precincts vary in size dramatically, from a handful of voters to thousands, we grouped smaller precincts within each county. We combined adjoining precincts until each grouped area reached

⁶ We could not determine the physical precincts associated with the last six ballot styles in Palm Beach County, so these styles are not included on the map. They contained a total of 51 votes for president and zero votes for Buchanan.

⁷ We obtained the data from: <http://www.leg.state.fl.us/edr/shape.htm>. The state legislature uses these maps for redistricting.

⁸ The eastern boundaries of counties in the State Legislature's map appear to extend beyond those recorded by the counties. For example, the precincts bordering the Atlantic Ocean in Palm Beach County are all stretched much farther to the east in this map than in precinct maps we obtained directly from the Palm Beach County Supervisor of Elections office. Broward County also includes an extra "no precinct" area on its eastern edge that does not appear in the precinct map we obtained from its Supervisor of Elections office.

⁹ Jon T. Kilpinen, Dept. of Geography & Meteorology, Valparaiso University, assembled county-level maps with attached 2000 presidential election vote totals. We downloaded these files from the following web site: <http://www.spatialnews.com/features/election2000/>. We first came across a county-level map of Buchanan support in Florida on Chris Volinsky's web site, <http://www.research.att.com/~volinsky/florida.html>, soon after Election Day. We modeled Figure 1 after Volinsky's map. However, in Volinsky's map Palm Beach appears to have annexed the southern part of Okeechobee.

1000 or more votes.¹⁰ Mapping the Buchanan vote without merging sparsely populated precincts produces similar patterns of support, with a few more “hot spots” in very small precincts where one or two Buchanan votes tipped his share over one percent.

For maps of absentee votes, we combined the precincts covered by the same ballot style into grouped areas. We then further grouped the smaller ballot style areas so that each area had at least 500 votes. This additional aggregation lessens the importance of outliers. The Buchanan vote was so low on average that even a single vote for Buchanan in a small area with few votes transforms it into an apparent Buchanan stronghold. Even without grouping smaller precincts together the patterns are reasonably clear, but merging small precincts in essence smooths out the outliers without discarding data.

RESULTS

Figure 1 displays Buchanan’s share of the vote in each county in Florida. Palm Beach County is an instantly visible red rectangle in a sea of blue. Of the 17 counties with Buchanan shares above 0.60%, only Palm Beach threw its support to Al Gore. Clearly, Palm Beach gave much more support to the right-wing Reform party candidate than did other counties in southern Florida, but this difference alone does not convincingly demonstrate the role of ballot design or even the existence of a problem. Other factors besides mistaken votes could have caused a heavily Democratic County to cast more than its share of votes for the most well-known right-wing candidate running for president.

In Figure 2A, the counties of Palm Beach, Broward, Glades, Martin, St. Lucie, Okeechobee, Highlands, and Hendry are displayed with color-coded levels of support for Pat Buchanan by precincts. Of these southern Florida counties, only Palm Beach and Broward supported Gore. They did so heavily, giving 62 and 67 percent of their votes respectively. In contrast, the other five counties near Palm Beach cast between 51 and 58 percent of their votes for George W. Bush, and only 40 to 47 percent for Gore. Support for Buchanan ranges from lows near or at zero percent in blue to one percent or more in red, with shades of purples for middle values. As this map makes instantly clear, the areas of high Buchanan support all fall within Palm Beach County. The red areas are distributed throughout Palm Beach, but these areas of relatively high percentages of Buchanan votes reach only up to the border of Palm Beach, never beyond it. An invisible fence appears to surround Palm Beach, keeping in the concentrations of Buchanan votes. If we think of red areas as highlands and blue areas as lowlands, then there is a noticeable escarpment surrounding Palm Beach County. Given that there is no political or demographic break at the county line between Palm Beach and Broward, this map provides strong visual evidence that something strange happened only within Palm Beach.

By narrowing the focus to the more populated and most demographically similar areas of Palm Beach and Broward Counties, we can see even more clearly the sharp contrast between Palm Beach and surrounding counties. Figure 2B displays the same precinct-level returns as Figure 2A, with a smaller range of view. The abrupt shift in Buchanan support is especially noteworthy at the line between Palm Beach and Broward, the two most populated and strongly Democratic

¹⁰ When a precinct or group of precincts reached 900 votes and was not close to any smaller precincts, we did not combine it with a precinct with over 1000 votes.

counties. The southern part of Martin is also visible, also showing a distinct break with Palm Beach right below.

For more evidence that the unusual and potentially confusing butterfly ballot may be the cause of the high concentration of support for Pat Buchanan in the Democratic stronghold of Palm Beach, we next map the ballots cast by absentee voters. Figure 3 shows the percentage of absentee votes cast for Buchanan by ballot style for the heavily populated counties of Palm Beach and Broward. The five relatively small Republican counties recorded absentee votes as a group, so the map shows the county-wide absentee Buchanan vote for them.

In contrast to the map of the votes cast in person on Election Day, the map of absentee votes does not show a pattern of Buchanan support limited to Palm Beach. Absentee voter support for Pat Buchanan is quite low across the entire region, with no abrupt changes at the county line. The one reddish spot represents the only area among the absentee votes where Buchanan's share of the vote rose above one percent. This area is a group of precincts with a total of 570 votes, only 6 cast for Pat Buchanan. This one outlier should not overshadow the fact that overall Palm Beach shows no break from surrounding counties in its absentee votes.

CONCLUSION

Taken together, the maps of Election Day votes by precinct and absentee votes by ballot style indicate the decisive effect of the butterfly ballot design in increasing Buchanan support within Palm Beach County alone. Areas of relatively high support for Buchanan go up to the boundary of Palm Beach but do not cross it. However, among absentee votes, there are few differences by county, and no sharp changes at county lines.

Figure 1. Buchanan Vote Percentage by Florida County

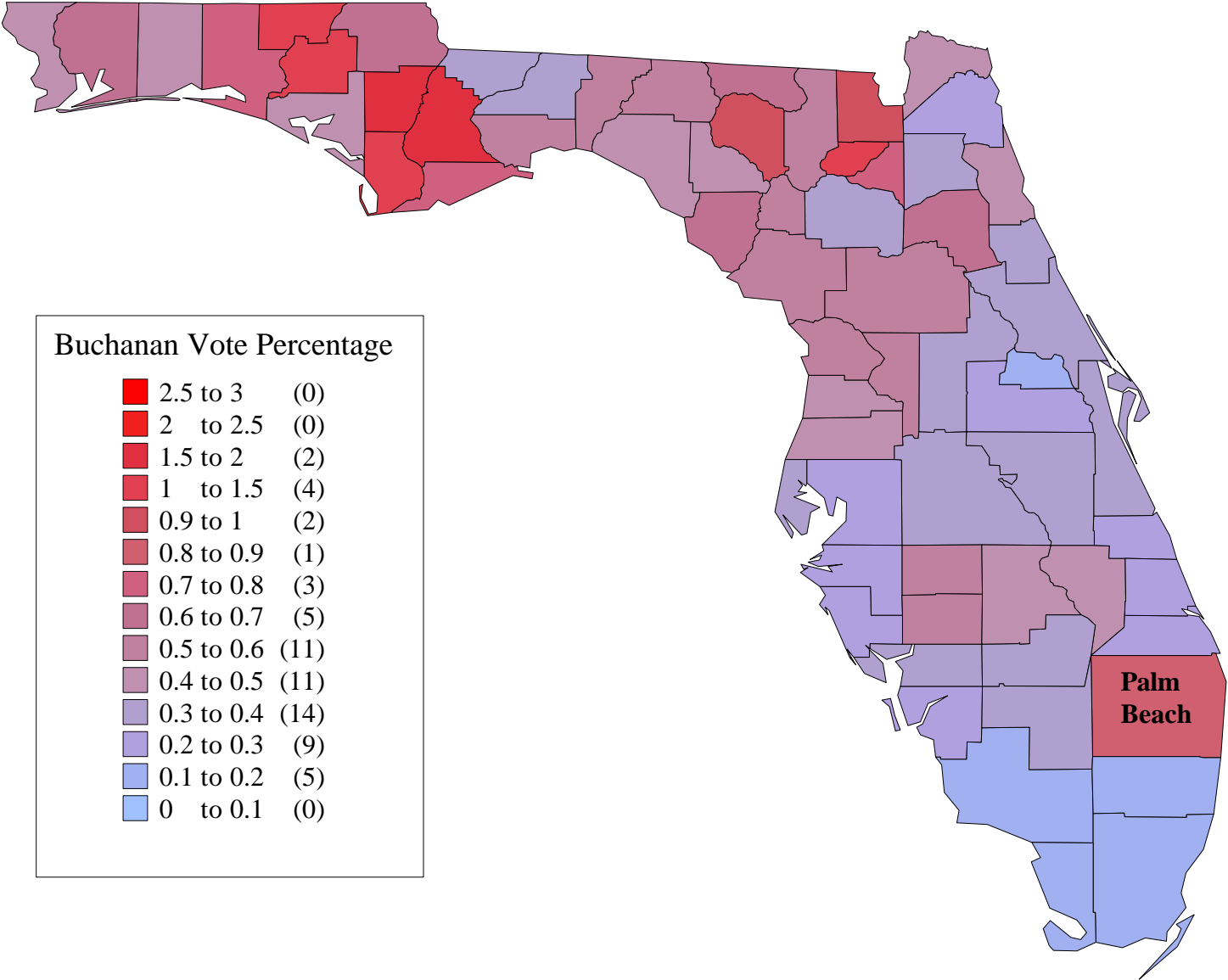


Figure 2A. Buchanan Vote Percentage by Precinct, Grouped for Vote Size

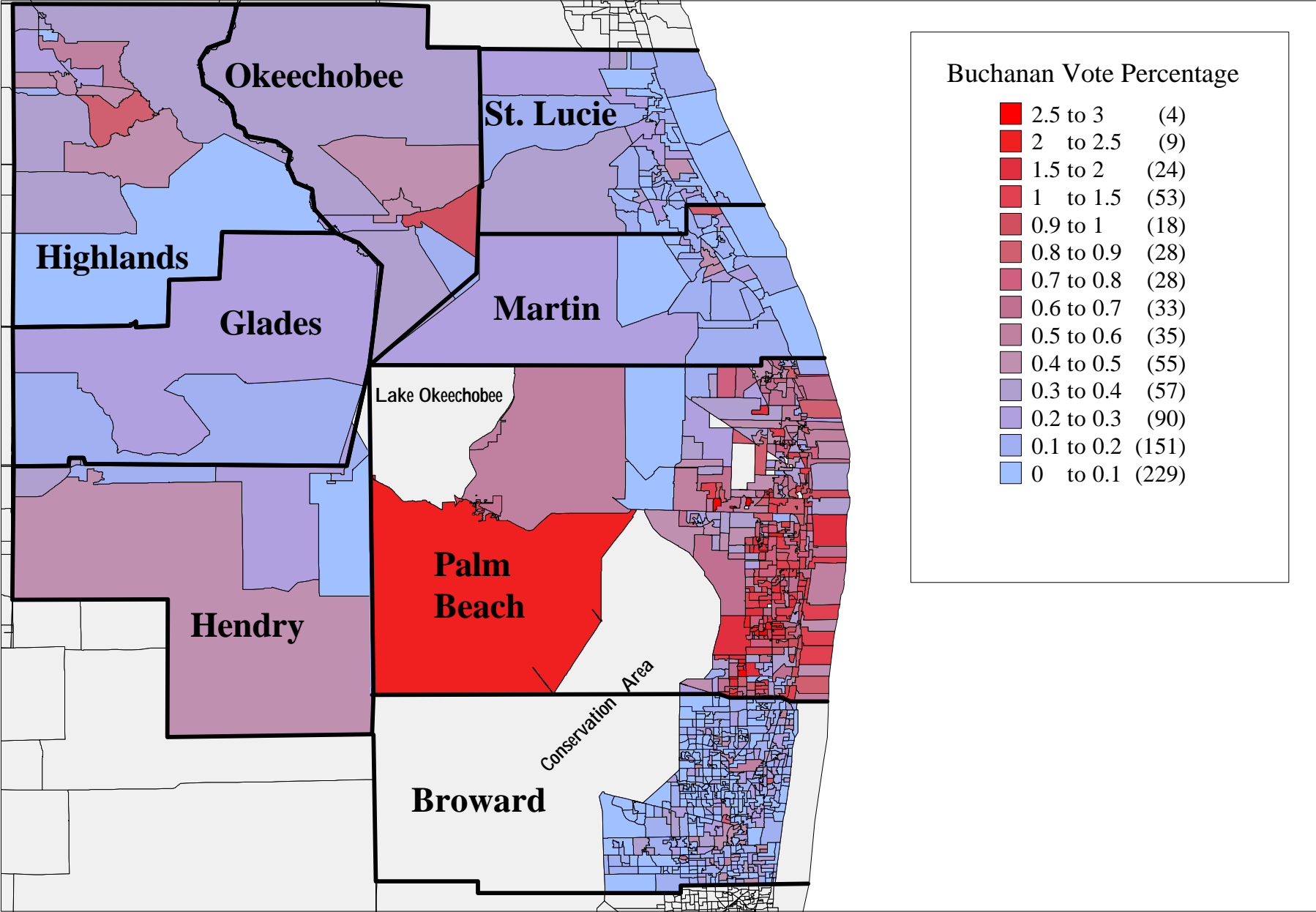


Figure 2B. Buchanan Vote Percentage by Precinct, Palm Beach and Broward Counties

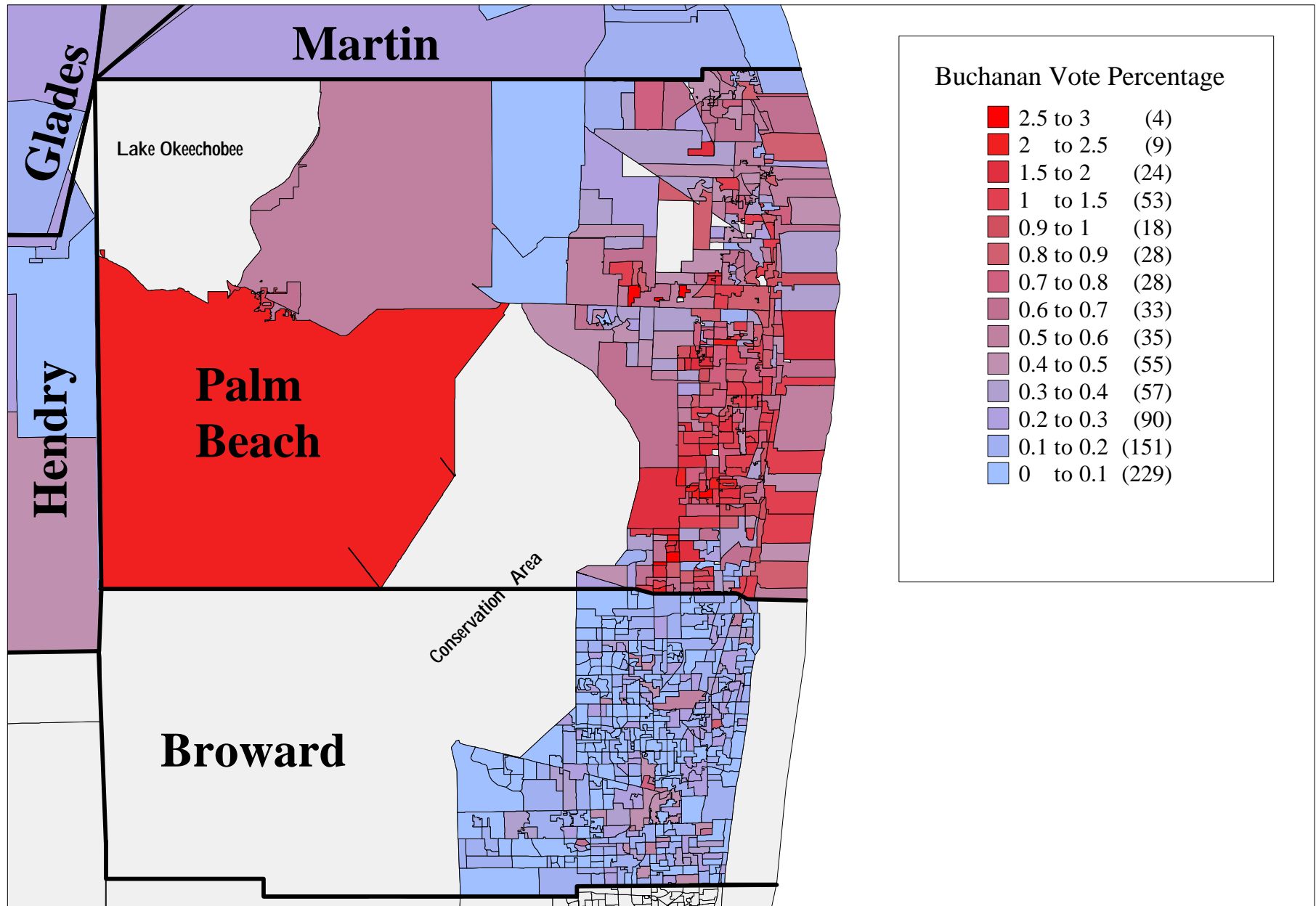


Figure 3. Absentee Votes by Ballot Style and County

