

# Tigers Stripes

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## IT'S A NEW SEASON! – By David Raglin

The Tigers have migrated north and the new season has begun. It was an odd spring training, with many key players taking most of their spring training at the World Baseball Classic. In Lakeland, good things and bad things happened with the players that remained in Tigers camp. Among the best things were the solid pitching of Matt Boyd and (after a very rocky start) Anibal Sanchez and the Tigers showing that they would make the tough decisions regardless of contract size by cutting Mike Pelfrey and putting Sanchez in the bullpen. If the Tigers are going to contend, the starting pitching must overcome the lack of depth among position players and the bullpen. Happily, the Tigers were in the enviable position of having two reasonable choices for the fifth spot in the rotation with Boyd and Sanchez.

The worst thing that happened was the injury to J.D. Martinez. The Tigers already had no depth among position players and Martinez' injury means that center and right fields will be manned by Andrew Romine, JaCoby Jones, Mikie Mahtook and Tyler Collins. At best, those are four replacement-level players that should not be playing regularly for a team trying to win. Until Martinez returns in late April/early May, the bottom four spots in the batting order will be two of those players, the catcher (either James McCann or Alex Avila), and Jose Iglesias. The Tigers will need a strong start from the top five in the order and the starting pitching to make up for the big talent drop-off in spots six through nine.

How will the Tigers do in 2017? It's basically the same team as last year, which makes it a bit easier to guess. They will do better if Justin Upton hits all year, Jordan Zimmermann recovers from his injuries and is effective, and the young starters come through. They will do worse if the J.D. Martinez injury lingers, if they do not come up with a credible center fielder, and if their aging players (who are susceptible to injury), spend significant stints in the trainer's room without the roster depth to replace them.

There are several sites that predict more than place in the division. Some predict records and the odds to make the playoffs, win the division and win the World Series, and even the runs scored and allowed for the season. They do that by running thousands of simulations of the season given their assumptions. Others just provide win-loss records. Below are the results for the 2016 Tigers and the predictions of various people, including *Tigers Stripes* editor Mark Pattison and myself, for the 2017 version of the club.

### Various Predictions for the 2017 Tigers

Source	W	L	RS/Game	RA/Game	Make Playoffs	Win Division	Win World Series
2016 Tigers .....	85	76	4.66	4.48	0.0%	0.0%	0.0%
Baseball Prospectus .....	79	83	4.57	4.70	22.6%	10.6%	1.2%
FanGraphs .....	82	80	4.70	4.70	27.4%	9.7%	1.1%
FiveThirtyEight .....	82	80	----	----	34.0%	19.0%	3.0%
Joe Sheehan .....	81	81	4.47	4.38	----	----	----
Dave Raglin .....	86	76	----	----	Will not make playoffs		
Mark Pattison .....	93	69	----	----	Will get to the World Series		
ESPN – 35 people, 5 to make the playoffs, 0 to win the division, 0 to win the World Series							
USA Today – 7 people, 3 to make the playoffs, 1 to win the division, 0 to win the World Series							

The stat people are generally in the same ballpark: 79-82 wins. Baseball Prospectus and FanGraphs has the Tigers scoring and allowing about as many runs per game as they did last year, while Sheehan has the Tigers offense not doing as well but the pitching doing better than expected.

I have the Tigers basically repeating their 2016 record, while Mark is highly optimistic. I'm rooting for Mark's to be the best prediction. Anyway, it will soon be out of the hands of the prognosticators and in the hands of the players. Play ball!!

**MIGUEL CABRERA AND STATCAST** – By David Raglin

You know who Miguel Cabrera is, of course, but what is Statcast? Statcast is the new major league system that uses special cameras to track everything happening on the field, from pitch speed to batted ball speed and the angle the ball takes off the bat to the path a fielder takes to a ball, to the number of rotations a ball makes on the way to the plate.

As you can imagine, this creates the ability to measure the game in so many more ways. Let's take a look at a simple one. Statcast measures how hard a ball is hit (called "exit velocity") and the angle it takes off the bat (called "launch angle"). Researchers have looked at the combinations of exit velocity and launch angle to determine the hits most likely to produce good results in both batting average and slugging percentage. Basically, any ball hit 98 mph with a launch angle of 26 to 33 degrees off the bat produces at least a .500 batting average and 1.500 slugging percentage. (As the miles per hour goes up, the optimum launch angle gets broader.) The hits that meet those criteria are called "barrels" -- the ball was hit solidly off the barrel of the bat. In 2016, barrels resulted in a .822 batting average and a 2.386 slugging percentage.

This is where Miggy comes in. He hit 72 barrels last year, the most in the majors (#2-#5 were Nelson Cruz, 68; Mark Trumbo, 67; Khris Davis, 65; and David Ortiz, 62 -- to play with the data yourself, go to [baseballsavant.com](http://baseballsavant.com).) He also had the highest percentage of swings that resulted in a barrel, 5.9 percent, and 10.6 percent of his plate appearances were barrels, second in the major behind Oakland's Khris Davis.

As good as Miggy did last year (.333 batting average, .393 on-base percentage, .563 slugging percentage, for a .956 on-base percentage plus slugging percentage, aka OPS), Statcast said based on how he hit the ball, he should have done much better, with a 1.098 OPS. Was it bad luck or something else?

It was something else. Cabrera hit seven balls that went over 400 feet in 2016 that were caught, six at home. Players on average hit .942 on balls that went 400 feet or more, but at Comerica, it was .852, so the ball was about three times as likely to be turned into an out ( $1.000 - .942 = .058$  compared to  $1.000 - .852 = .148$ ).

Comerica Park was designed to be the antithesis of Tiger Stadium in many ways. While Tiger Stadium was a hitter's park, despite the big center field, Comerica was an extreme pitcher's park. Part of that was rectified by moving the bullpens to left field in 2005, but the large center field and right center field in front of the out-of-town scoreboard (where the wall juts out) remain. Anybody who watches Miggy hit knows he has serious power to right center field. (I remember watching batting practice in Washington from the right center field scoreboard seats and noting Miggy hit more home runs to us there than anybody else I've seen at Nationals Park.) Players (both Tigers and opponents) hit only .714 on barrels in Comerica, dead last in the majors (Tropicana Field was 29th at .761), compared to the .822 major league average.

(Of course, there is the flip side of how much this helps Tiger pitchers. I have not looked at that yet but hope to this season.)

But, over the last three years, there have been almost the same number of runs, home runs by lefties, and home runs by righties in Comerica as in Tigers road games (by both teams). So, is Comerica really a pitcher's park? The answer is that it is not, but the park does have large effects on certain types of hitters, like Miggy, whose power is more to the middle of the field. It would be extreme to redesign a park for one player, but it does seem like the Tigers ballpark and Miggy and a power-based offense are not good matches. Certainly, since the ballpark is so extreme in this way, the Tigers should keep this in mind when making personnel decisions.

Do you want to read more about this? Here are the articles I referenced in writing this piece (if you are looking at the paper version of *Stripes*, just try searching on these terms). Also, you can play with the Statcast leader boards at [www.baseballsavant.com](http://www.baseballsavant.com) and do your own rankings.

<http://m.mlb.com/news/article/221730814/detroit-tigers-2017-statcast-preview/>

<http://m.tigers.mlb.com/news/article/203861880/tigers-barrels-swallowed-up-by-comerica-park/>

<http://www.blessyouboys.com/2017/3/29/15084046/spring-training-miguel-cabrera-detroit-tigers-preview-statcast>

**MORE ON STATCAST** – By David Raglin

This is not entirely Tigers-related, but I wanted to write about Statcast and how it might help explain a large change in the game we have seen the last few years. Over the last three seasons, we've gone from 4,186 to 4,909 to 5,610 home runs. However, this is not like the steroid era when all offensive numbers jumped. Last year, teams scored 4.48 runs per game with a .255/.322/.417 slash line; the last time teams hit this many home runs in a season, 2000, they scored 5.14 runs per game with a .270/.345/.437 slash line. In 2009, teams scored 4.61 runs per game while hitting only 5,042 homers. So, why the change?

This might be the first time that we see the impact power analytics can have when the players use them to better their game. There is a lot of evidence that players are paying attention to things like exit velocity and launch angle. J.D. Martinez is known for his philosophy of trying to hit the ball in the air, quoting statistics to back that. He also uses the stats as a check, he told USA Today that, "There was a point last year when I was hitting like .250, but I looked at my launch angles and my exit velo[city] and it was good. It was fine. It was right where it normally is. So it's almost a sense of not to panic. It's more of a comfort, the hits will come. Everything is in the right spot right now." Martinez said he has been getting a lot of questions from teammates and others about the secret to his emergence the last few years.

Daniel Murphy, the Washington Nationals second baseman who had a breakout season last year, is a devotee of these stats, "All these guys think I'm crazy, but I want them all to hit the ball in the air -- optimally about 25 degrees at 98 miles an hour. ... It's cool because with all the data we have now, we've kind of been given some of the answers to the test. If you get it at this certain launch angle at this exit velocity, it's damage."

It is not all stats; many players have talked about trying to lift the ball more without noting the stats, and with baseball being a game of adjustments, pitchers are surely looking at adjustments to counter what the hitters are doing. However, there is reason to believe the data are causing some players to make changes that are changing the game.

For more on this, see the following articles:

<http://www.fangraphs.com/blogs/j-d-martinez-debunks-conventional-wisdom-thinks-a-tipping-point-is-near/>

<http://m.mlb.com/news/article/220741974/hitters-trying-for-homers-may-be-part-of-surge/>

<https://www.usatoday.com/story/sports/mlb/2017/03/23/hitters-embracing-statcast-exit-velocity-launch-angle-more-home-runs/99531144/>

**SPRING TRAINING, PLEASE, AND DON'T HOLD THE MAYO** -- By Mark Pattison

When you go to spring training each year for as long as the Mayo Smith Society has, you kinda expect that things will be the same year-in and year-out. Au contraire, mon frere! While there is a certain routine in the pattern, there is loads of variation within the pattern.

The star of the Tigers 2017 spring training was not on the field, it was the field itself, or rather, the stadium complex. The Tigers have trained in Lakeland since 1934 (except for the war years) and Joker Marchant Stadium was built on the training complex in 1966. A major renovation was done in 2003, but this one dwarfed that one. A new team complex beyond the right field wall houses a new clubhouse, weight room, team medical facilities, and team offices. We had the chance to tour it on Monday night of our week in Lakeland and it is beautiful. There is a new color scoreboard in left field and a party deck in right on top of the team complex where one can stand and watch the game.

One big wrinkle to this year's spring training experience was the World Baseball Classic, which took tons of Tigers out of our sight for most of the week. We saw Victor Martinez for two games, Bruce Rondon for one, and Ian Kinsler, Francisco Rodriguez and Miguel Cabrera for none. (At least Omar Vizquel, Team Venezuela's manager, was in good enough shape to coach four games at first base, and Team USA manager and coach Jim Leyland and Alan Trammell, respectively, simultaneously tossed out the first pitch on Publix Field at Joker Marchant Stadium -- the ballpark's new name -- during the last home game of our trip). We also saw J.D. Martinez for all of one half-inning, witnessing his awkward gait upon nabbing a shallow fly in right-center that resulted in a foot sprain that will keep him out for most of the season's first month.

All these excused absences allowed the Society faithful to see lots of prospects trying to impress the Detroit brass. One who impressed us was corner infielder Dominic Ficociello, who launched a three-run homer in the top of the ninth inning to put Detroit ahead 4-2 in a game against Toronto in Dunedin (too bad a Blue

Jays minor leaguer cracked a three-run blast of his own in the bottom of inning to give the home team a win). We saw "Big Bomb Dom" (not his nickname -- yet) hustle for foul balls and play creditable defense until our last game of the trip, committing an error to mar a six-inning, no-hit (one-walk) start by Anibal Sanchez against the Pirates in Bradenton. Since he will be playing for Double-A Erie, Washington area Society members will get to see him in Bowie, Md., and cheer like mad for him. He's certainly raised his "Fico" score!

Justin Verlander wasn't the only Cy Young winner in Tigertown during our stay. Former Detroit reliever Mike Marshall, who won the NL Cy Young in 1974 with the Dodgers, was one of our speakers at our "opening night" dinner in the minor league cafeteria. Marshall told us of his minor-league salad days as a sharp-hitting shortstop until his back wouldn't let him bend down to pick up grounders, and how he broke in with the Tigers 50 years ago after just a year and a half as a minor-league pitcher (are you reading, Anthony Gose?), but had to abandon the conventional pitching motion when he lost 24 degrees of movement in his right arm; he still can't touch his shoulder with his middle finger. "Pain tells you, you shouldn't do it," he warned. Marshall, who owns a doctorate in kinesiology from Michigan State, adopted a motion that flicks his palm away from the plate. He said no other pitcher today throws like he did, and he laments all the ruined and threatened arms of today's big-name stars.

Sam Menzin, the Tigers' director of baseball operations (and chief analytics guru), told about his job; He's the franchise's salary cap expert, too. Menzin waxed enthusiastic about recent draft choices like righthanders Matt Manning and Beau Burrows, outfielder Christen Stewart, infielder Dixon Machado and some guy named Ficociello, and how the Tigers' renovation of its Lakeland complex brought about the hosting of an annual dinner celebrating upgraded facilities attended by the governor of Florida.

The Mayo Maulers, after 30-plus seasons, finally broke down and bought a softball bat. They immediately found out how much better softball practice goes when you've got a bat!

Oh, yeah, the games. Detroit went 4-3 during our week in Lakeland, winning two games in the bottom of the ninth (or later), but losing two in the bottom of the ninth, too, plus a third in the eighth. The Tigers' starters did great work, none of them giving up more than two runs. Verlander surrendered one run through six highly efficient innings vs. Atlanta, Matthew Boyd had two sparkling outings; by the end of our trip, he had pitched 21.2 innings striking out 21 batters and walking none. We got to see 10 innings of scoreless ball pitched by Sanchez, earning a spot on the roster. Aside from the aforementioned Ficociello, Nick ("call me Nicholas") Castellanos looked sharp at the plate and in the field, and Justin Upton looked like the first four months of last season were just a bump in the road. Machado and converted outfielder JaCoby Jones made difficult plays look easy, and turned impossible plays like seasoned big-leaguers.

Finally, after all this, we may have started a new tradition. Based on the "Napkin of Integrity" preseason predictions during the Society's "Tiger Talk" dinners on Capitol Hill in Washington, we unveiled the "Paper Plate of Prognostication" while munching on Ciao Bella square pizza, offering our guesses on how many wins the Tigers would collect this season, plus how many home runs their leading homer-hitter would belt (no names needed to be provided). Who will win? As long as the answer is Detroit, the most accurate guesser among the Smithers doesn't matter!

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