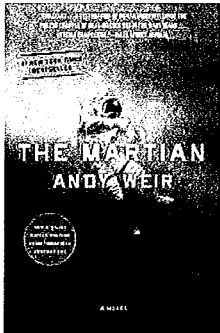

Summary	Author Bio	Book Reviews	Discussion Questions	Full Version	Print
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[http://www.amazon.com/gp/product/0553418025/ref=as_li_tl?](http://www.amazon.com/gp/product/0553418025/ref=as_li_tl?ie=UTF8&camp=1789&creative=9325&creativeASIN=0553418025&linkCode=as2&tag=litl-20&linkId=MJNY6Q1K7LHHT34F)[ie=UTF8&camp=1789&creative=9325&creativeASIN=0553418025&linkCode=as2&tag=litl-20&linkId=MJNY6Q1K7LHHT34F\)](http://www.amazon.com/gp/product/0553418025/ref=as_li_tl?ie=UTF8&camp=1789&creative=9325&creativeASIN=0553418025&linkCode=as2&tag=litl-20&linkId=MJNY6Q1K7LHHT34F)***The Martian****Andy Weir, 2014**Crown Publishing**384 pp.**ISBN-13: 9780553418026***Summary**

Six days ago, astronaut Mark Watney became one of the first people to walk on Mars.

Now, he's sure he'll be the first person to die there.

After a dust storm nearly kills him and forces his crew to evacuate while thinking him dead, Mark finds himself stranded and completely alone with no way to even signal Earth that he's alive—and even if he could get word out, his supplies would be gone long before a rescue could arrive.

Chances are, though, he won't have time to starve to death. The damaged machinery, unforgiving environment, or plain-old "human error" are much more likely to kill him first.

But Mark isn't ready to give up yet. Drawing on his ingenuity, his engineering skills—and a relentless, dogged refusal to quit—he steadfastly confronts one seemingly insurmountable obstacle after the next. Will his resourcefulness be enough to overcome the impossible odds against him?

8 tips for surviving on Mars

So you want to live on Mars. Perhaps it's the rugged terrain, beautiful scenery, or vast natural landscape that appeals to you. Or maybe you're just a lunatic who wants to survive in a lifeless barren wasteland. Whatever your reasons, there are a

few things you should know:

1: You're going to need a pressure vessel.

Mars's atmospheric pressure is less than one percent of Earth's. So basically, it's nothing. Being on the surface of Mars is almost the same as being in deep space. You better bring a nice, sturdy container to hold air in. By the way, this will be your home forever. So try to make it as big as you can.

2: You're going to need oxygen.

You probably plan to breathe during your stay, so you'll need to have something in that pressure vessel. Fortunately, you can get this from Mars itself. The atmosphere is very thin, but it is present and it's almost entirely carbon dioxide. There are lots of ways to strip the carbon off carbon dioxide and liberate the oxygen. You could have complex mechanical oxygenators or you could just grow some plants.

3: You're going to need radiation shielding.

Earth's liquid core gives it a magnetic field that protects us from most of the nasty crap the sun pukes out at us. Mars has no such luxury. All kinds of solar radiation gets to the surface. Unless you're a fan of cancer, you're going to want your accommodations to be radiation-shielded. The easiest way to do that is to bury your base in Martian sand and rocks. They're not exactly in short supply, so you can just make the pile deeper and deeper until it's blocking enough.

4: You're going to need water.

Again, Mars provides. The Curiosity probe recently discovered that Martian soil has quite a lot of ice in it. About 35 liters per cubic meter. All you need to do is scoop it up, heat it, and strain out the water. Once you have a good supply, a simple distillery will allow you to reuse it over and over.

5: You're going to need food.

Just eat Martians. They taste like chicken.

6: Oh, come on.

All right, all right. Food is the one thing you need that can't be found in abundance on Mars. You'll have to grow it yourself. But you're in luck, because Mars is actually a decent place for a greenhouse. The day/night cycle is almost identical to Earth's, which Earth plants evolved to optimize for. And the total solar energy hitting the surface is enough for their needs.

But you can't just grow plants on the freezing, near-vacuum surface. You'll need a pressure container for them as well. And that one might have to be pretty big. Just think of how much food you eat in a year and imagine how much space it takes to grow it.

Hope you like potatoes. They're the best calorie yield per land area.

7: You're going to need energy.

However you set things up, it won't be a self-contained system. Among other things, you'll need to deal with heating your home and greenhouse. Mars's average daily

temperature is -50C (-58F), so it'll be a continual energy drain to keep warm. Not to mention the other life support systems, most notably your oxygenator. And if you're thinking your greenhouse will keep the atmosphere in balance, think again. A biosphere is far too risky on this scale.

8: You're going to need a reason to be there.

Why go out of your way to risk your life? Do you want to study the planet itself? Start your own civilization? Exploit local resources for profit? Make a base with a big death ray so you can address the UN while wearing an ominous mask and demand ransom? Whatever your goal is, you better have it pretty well defined, and you better really mean it. Because in the end, Mars is a harsh, dangerous place and if something goes wrong you'll have no hope of rescue. Whatever your reason is, it better be worth it. *(From the publisher.)*

See the 2015 film with Matt Damon.

Listen to Screen Thoughts with Hollister & O'Toole as they review the book and movie.

Author Bio

- Birth—June 16, 1972
- Where—Davis, California, USA
- Education—University of California, San Diego (no degree)
- Currently—lives in Mountain View, California

Andy Weir is an American novelist and software engineer known internationally for his debut novel *The Martian*, which was later adapted into a film of the same name directed by Ridley Scott in 2015.

Early life

Weir was born and raised in California, the only child of an accelerator physicist father and an electrical-engineer mother who divorced when he was eight. Weir grew up reading classic science fiction such as the works of Arthur C. Clarke and Isaac Asimov. At the age of 15, he began working as a computer programmer for Sandia National Laboratories. He studied computer science at UC San Diego, although he did not graduate. He worked as a programmer for several software companies, including AOL, Palm, MobileIron and Blizzard, where he worked on Warcraft 2.

Writing

Weir began writing science fiction in his 20s and published work on his website for years. His first work to gain significant attention was "The Egg", a short story that has been adapted into a number of YouTube videos and a one-act play.

Weir is best known for his first published novel, *The Martian*. He wrote the book to be as scientifically accurate as possible and his writing included extensive research

into orbital mechanics, conditions on Mars, the history of manned spaceflight, and botany. Originally published as a free serial on his website, some readers requested he make it available on Kindle.

First sold for 99 cents, the novel made it to the Kindle bestsellers list. Weir was then approached by a literary agent and sold the rights of the book to an imprint of Penguin Random House. The print version (slightly edited from the original) of the novel debuted at #12 on the *New York Times* bestseller list. A *Wall Street Journal* review called the novel "the best pure sci-fi novel in years." In 2015 it was adapted to film, starring Matt Damon and Jessica Chastain.

Weir is working on his second novel, initially titled *Zhek*. He describes it as "a more traditional sci-fi novel, with has aliens, telepathy, faster-than-light travel, etc."

Personal

He currently lives in Mountain View, California, in a rented two-bedroom maisonette. Since he has a deep fear of flying, he never visited the set of the filming of *The Martian* in Budapest, which is where most of the Mars scenes were shot. With some therapy and medication, however, he was able to fly to Houston to visit Johnson Space Center and to San Diego to attend Comic-Con.

Weir refers to himself as an agnostic. As a fiscally-conservative social liberal, he tries to keep his political views out of his writing. (*Adapted from Wikipedia. Retrieved 12/22/2015.*)

Book Reviews

Brilliant...a celebration of human ingenuity [and] the purest example of real-science sci-fi for many years...Utterly compelling

Wall Street Journal

An impressively geeky debut...the technical details keep the story relentlessly precise and the suspense ramped up. And really, how can anyone not root for a regular dude to prove the U-S-A still has the Right Stuff?

Entertainment Weekly

Andy Weir delivers with *The Martian*...a story for readers who enjoy thrillers, science fiction, non-fiction, or flat-out adventure [and] an authentic portrayal of the future of space travel.

Associated Press

(*Starred review.*) A dust storm strands astronaut Mark Watney on Mars and forces his landing crew to abandon the mission and return to Earth in Weir's excellent first

novel, an SF thriller..... Deftly avoiding the problem of the Robinson Crusoe tale that bogs down in repetitious behavior, Weir uses Watney's proactive nature and determination to survive to keep the story escalating to a riveting conclusion.

Publishers Weekly

(*Starred review.*) Weir combines the heart-stopping with the humorous in this brilliant debut novel...by placing a nail-biting life-and-death situation on Mars and adding a snarky and wise-cracking nerdy hero, Weir has created the perfect mix of action and space adventure.

Library Journal

Riveting...a tightly constructed and completely believable story of a man's ingenuity and strength in the face of seemingly insurmountable odds.

Booklist

Sharp, funny and thrilling, with just the right amount of geekery...Weir displays a virtuosic ability to write about highly technical situations without leaving readers far behind. The result is a story that is as plausible as it is compelling.

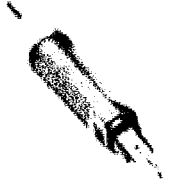
Kirkus Reviews

Discussion Questions

1. How did *The Martian* challenge your expectations of what the novel would be? What did you find most surprising about it?
2. What makes us root for a character to live in a survival story? In what ways do you identify with Mark? How does the author get you to care about him?
3. Do you believe the crew did the right thing in abandoning the search for Mark? Was there an alternative choice?
4. Did you find the science and technology behind Mark's problem-solving accessible? How did that information add to the realism of the story?
5. What are some of the ways the author established his credibility with scientific detail? Which of Mark's solutions did you find most amazing and yet believable?
5. What is your visual picture of the surface of Mars, based on the descriptions in the book? Have you seen photographs of the planet?
7. Who knew potatoes, duct tape, and seventies reruns were the key to space survival? How does each of these items represent aspects of Mark's character that help him survive?

8. How is Mark's sense of humor as much a survival skill as his knowledge of botany? Do you have a favorite funny line of his?
9. To what extent does Mark's log serve as his companion? Do you think it's implicit in the narrative that maintaining a log keeps him sane?
10. The author provides almost no back story regarding Mark's life on Earth. Why do you think he made this choice? What do you imagine Mark's past life was like?
11. There's no mention of Mark having a romantic relationship on Earth. Do you think that makes it easier or harder to endure his isolation? How would the story be different if he was in love with someone back home?
12. Were there points in the novel when you became convinced Mark couldn't survive? What were they, and what made those situations seem so dire?
13. The first time the narrative switched from Mark's log entries to third-person authorial narrative back on Earth, were you surprised? How does alternating between Mark's point of view and the situation on Earth enhance the story?
14. Did you believe the commitment of those on Earth to rescuing one astronaut? What convinced you most?
15. To what extent do you think guilt played a part in the crew's choice to go back to Mark? To what extent loyalty? How would you explain the difference?
16. How does the author handle the passage of time in the book? Did he transition smoothly from a day-to-day account to a span of one and a half years? How does he use the passage of time to build suspense?
17. Unlike other castaways, Mark can approximately predict the timing of his potential rescue. How does that knowledge help him? How could it work against him?
18. When Mark leaves the Hab and ventures out in the rover, did you feel a loss of security for him? In addition to time, the author uses distance to build suspense. Discuss how.
19. Where would you place *The Martian* in the canon of classic space exploration films like *2001: A Space Odyssey*, *Apollo 13*, and *Gravity*? What does it have in common with these stories? How is it different?
20. A survival story has to resonate on a universal level to be effective, whether it's set on a desert island or another planet. How important are challenges in keeping life vital? To what extent are our everyday lives about problem-solving and maintaining hope?

(Questions issued by the publisher.)

**About the Author****Full text biography:****Andy Weir****Birth Date :** 1972**Place of Birth :** United States,California,Davis**Nationality:** American**Occupation :** Novelist**Table of Contents:****Awards****Personal Information****Career****Writings****Media Adaptions****Sidelights****Related Information**

about this author

Awards:

Best translated novel prize, Seiun Awards, and best translated science fiction book prize, Geffen Awards, both 2015, both for translations of *The Martian*.

Personal Information:

Born June 16, 1972, in CA; son of a particle physicist and an electrical engineer. **Education:** Attended University of California--San Diego. **Addresses:** Home: Mountain View, CA. **E-mail:** sephalon@comcast.net.

Career Information:

Writer. Former programmer for Sandia National Laboratories and for software companies, including AOL and Blizzard.

Writings:

- *The Martian* (novel), Crown Publishers (New York, NY), 2014.

Also author of short fiction.

Media Adaptions:

The Martian has been made into a film directed by Ridley Scott and starring Matt Damon, with a release date of October 2015.

Sidelights:

Andy Weir, who describes himself on his Web site as a "lifelong space nerd," has been writing science fiction since his early twenties, publishing these stories on his Web site. His first novel, *The Martian*, also began as a self-published work, which Weir posted on his Web site in serialized form over several years. It proved so popular that Weir made it available as an ebook on Kindle. Its popularity led to a lucrative book deal for Weir. *The Martian* reached number twelve on the *New York Times* best-seller list in its first week of publication.

The novel, which tells the story of astronaut Mark Watney after he is left behind on Mars when his crewmates

mistakenly assume he has died in a massive sandstorm during their mission, won immediate acclaim. *Entertainment Weekly* writer Sara Vilkomerson described the book as "a riveting adventure saga ... with enough physics and math to satisfy hardcore sci-fi fans" but a protagonist who is sympathetic and engaging enough to make the book a "mainstream hit." Watney, who has served on two previous missions to Mars, must draw on all of his wits and training to keep himself alive over the course of four years, when the next Mars mission will land on the planet. He figures out how to grow food, make clean water, rig up a caravan with which he can travel across the surface, and create a way to communicate with NASA and with the ship that had left him for dead.

Though *Maclean's* reviewer Kate Lunau observed that Watney lacks depth as a character and has no apparent life outside of his work, others enjoyed the witty voice with which he narrates his always exciting story. Reviewers also admired the novel's technological sophistication and detail. Writing in the *Wall Street Journal*, Tom Shippey hailed *The Martian* as "techno sci-fi at a level even Arthur Clarke never achieved. It's also a celebration of human ingenuity." Asked by *Voice of Youth Advocates* interviewer Rebecca A. Hill to discuss his inspirations for the novel, Weir replied: "By far the biggest inspiration was Apollo 13. It showed the space program's ability to react to the unexpected, and was among the finest moments in NASA's history, despite being a failed mission." Indeed, *Washington Post* contributor Joel Achenbach went so far as to say that the novel "may have saved NASA and the entire space program" by "mak[ing] a human landing and perhaps even colonization of Mars seem plausible at the nuts-and-bolts, airlocks-and-solar-panels level."

Related Information:

PERIODICALS

- *Entertainment Close-up*, June 3, 2015, "Podium Publishing: *The Martian* Gets Audie Award: Matt Damon to Star in Ridley Scott-directed Film Version."
- *Maclean's*, March 10, 2014, Kate Lunau, review of *The Martian*, p. 59.
- *Voice of Youth Advocates*, June, 2015, Rebecca A. Hill, interview with Weir, p. 46.
- *Wall Street Journal*, February 7, 2014, Tom Shippey, review of *The Martian*.

ONLINE

- *Andy Weir Home page*, <http://www.andyweir.com> (July 15, 2015).
- *A.V. Club*, <http://www.avclub.com/> (February 10, 2014), Samantha Nelson, review of *The Martian*.
- *Entertainment Weekly online*, <http://www.ew.com/> (November 5, 2014), Sara Vilkomerson, "Andy Weir on His Strange Journey from Self-Publishing to Hollywood."
- *Popular Mechanics Online*, <http://www.popularmechanics.com/> (June 18, 2015), Andrew Moseman, "*The Martian* Author Andy Weir Explains All the Ways Mars Wants to Kill You."
- *Strange Horizons*, <http://www.strangehorizons.com/> (March 18, 2015), Mark Granger, review of *The Martian*.
- *Washington Post online*, <http://www.washingtonpost.com/> (May 5, 2015), Joel Achenbach, "Andy Weir and His Book *The Martian* May Have Saved NASA and the Entire Space Program."*

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AUTHOR INTERVIEWS

Sandstorms, Explosions, Potatoes, Oh My: 'Martian' Takes Its Science Seriously

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Transcript

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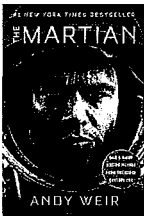
Heard on All Things Considered

NPR STAFF



Astronaut Mark Watney (Matt Damon) gets stranded on Mars in *The Martian*.

Courtesy of Twentieth Century Fox



The Martian

by Andy Weir

Paperback, 369
pages

Some pretty horrible things befall astronaut Mark Watney in the new movie *The Martian*: sandstorms, explosions, extreme isolation, even frustrations growing potatoes. It's a series of unfortunate events

purchase

that's at once highly scientific and very entertaining.

The Martian is the brainchild of author Andy Weir, who wrote the blockbuster novel that inspired the film. As Weir tells it, he'd always longed for some science fiction with greater emphasis on the science.

"I was sitting around thinking about how a manned mission to Mars could actually work using today's technology. Then I started thinking about all the things that could go wrong," Weir tells NPR's Arun Rath.

"So I created an unfortunate protagonist and subjected him to all of it."

Weir began writing the story in serialized posts on his personal website. When he finished, readers asked him to publish an e-book version on Amazon — where it became a runaway best-seller and caught the eyes of both Crown Publishing (for a physical book) and Twentieth Century Fox (for a movie).

"I mean, you fantasize about that sort of thing," he laughs. "But you don't really think it's gonna happen."

Listen to the full interview at the audio link above.

Interview highlights

On how the deals came together

The print deal and the movie deal were being negotiated simultaneously, and ultimately the two deals were agreed to four days apart. That was an eventful week for me. By the way, at the time I was a computer programmer, so I was like in my cubicle fixing bugs, then I'd sneak off to take a phone call about my movie deal, then back to my cubicle to fix bugs. It was pretty surreal.



Andy Weir works as a software engineer. *The Martian* is his first novel.

Courtesy of Broadway Books

On Hollywood's relationship with science

The purpose of Hollywood is to make something that's fun to watch. And they will happily sacrifice scientific accuracy for entertainment, and I don't think there's anything wrong with that. ... It doesn't bug me that they do that.

Sometimes it bugs me when they perpetrate scientific myths. Kind of like — what was a recent one? [The film] *Lucy* — where they said, "You know, humans only use 10 percent of their brain." That's one of those science myths that drives me crazy. I want to beat my head up against the wall whenever I hear that.

It's one thing to say, "Our ship has a warp drive and can travel hundreds of times the speed of light." But it's another thing to actually reinforce a public misconception about science.

On his opinion of the movie

They did a great job. It is fantastic. Matt Damon just completely nails the character of Watney. He's exactly the way I imagined him.

One thing that Ridley Scott [the director] is actually kind of famous for in a lot of his movies are these grand, sweeping panoramic vistas of the setting. And *The Martian* is no different. There's beautiful shots of Mars and Martian scenery and terrain. That's something that's really hard to convey in a book. There's only so long you can describe scenery and landscape before the reader throws the book over his shoulder. So it was really nice to see that.



MONKEY SEE

Matt Damon On Mars: A Toronto Diary, Part 1

On the biggest scientific inaccuracy in the movie

The biggest inaccuracy in the movie is straight from the book, so it's also a big inaccuracy in the book. It's right at the beginning, the sandstorm that strands him there. (So this is not a spoiler; everyone knows he gets stranded there due to a sandstorm.)

In reality, Mars' atmosphere is 1/200th the density of Earth's. So while they do get 150 km/hr sandstorms, the inertia behind them — because their air is so thin — it would feel like a gentle breeze on Earth. A Martian sandstorm can't do any damage. And I knew that at the time I wrote it.

I had an alternate beginning in mind where they're doing an engine test on their

ascent vehicle, and there's an explosion and that causes all the problems. But it just wasn't as interesting and it wasn't as cool. And it's a man-versus-nature story. I wanted nature to get the first punch.

So I went ahead and made that deliberate concession to reality, figuring, "Ah, not that many people will know it." And then now that the movie's come out, all the experts are saying, "Hey, everyone should be aware that this sandstorm thing doesn't really work and Mars isn't like that."

So I have inadvertently educated the public about Martian sandstorms. And I feel pretty good about that.