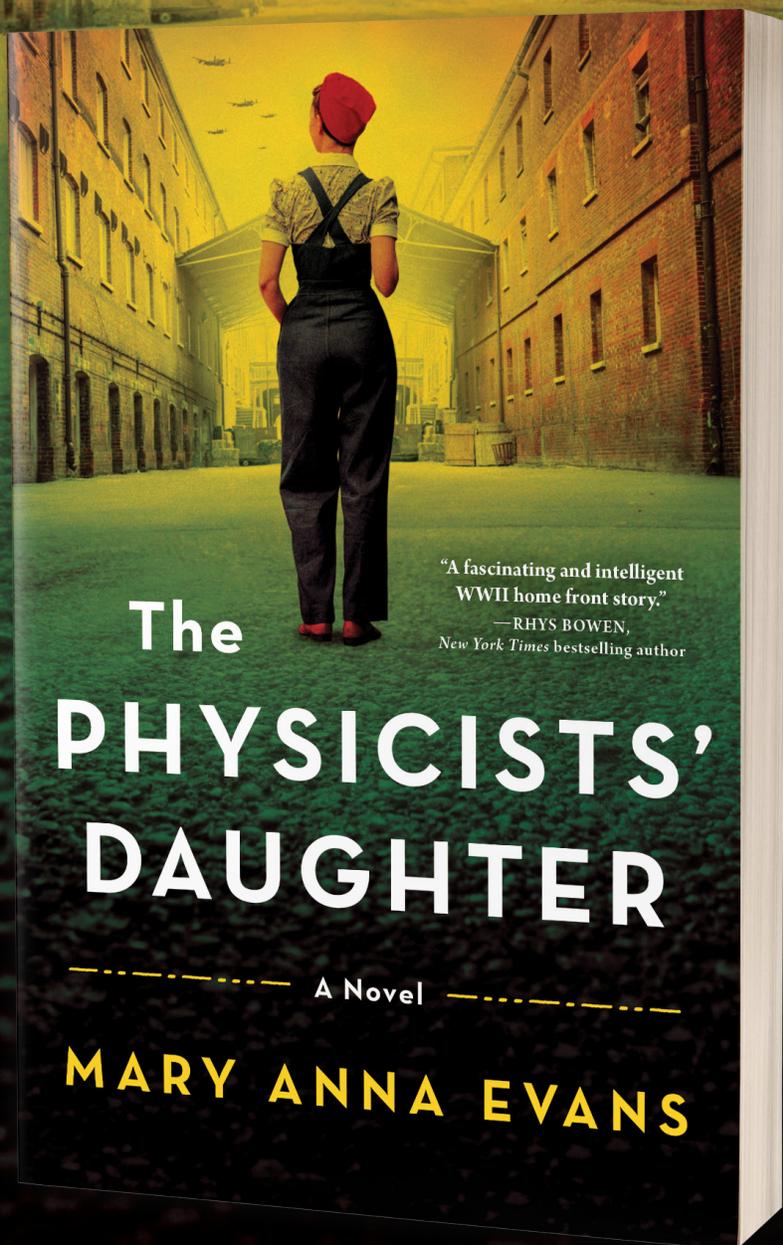


The
**PHYSICISTS'
DAUGHTER**
BOOK CLUB GUIDE



The PHYSICISTS' DAUGHTER

GET INTO THE SWING OF THE 1940S WITH THIS PLAYLIST!

1. "Chattanooga Choo Choo" - Glenn Miller
2. "Swinging on a Star" - Bing Crosby
3. "You Are My Sunshine" - Jimmie Davis
4. "Don't Fence Me In" - Bing Crosby & the Andrew Sisters
5. "(I Love You) For Sentimental Reasons" - Nat King Cole
6. "I'll Be Seeing You" - Bing Crosby
7. "Straighten Up and Fly Right" - Nat King Cole
8. "The Trolley Song" - Judy Garland
9. "G.I. Jive" - Louis Jordan, Johnny Mercer
10. "When You Wish Upon a Star" - Cliff Edwards, Glenn Miller, Guy Lombardo
11. "Star Dust" - Artie Shaw
12. "This Land Is Your Land" - Woody Guthrie
13. "Till The End of Time" - Perry Como



The PHYSICISTS' DAUGHTER

RATION-FRIENDLY RECIPES:

RATION STAMP CHOCOLATE CAKE

Ingredients

2 cups sifted cake flour	½ cup shortening
2 ½ teaspoons baking powder	2 large eggs, separated
½ teaspoon salt	½ cup milk
1 ⅓ cups white corn syrup	2 (2-ounce) squares chocolate (melted)



Directions

Preheat the oven to 350°F and grease and flour two 8-inch round cake pans. In a large bowl, combine the cake flour, baking powder, and salt. Set aside. In a separate bowl, cream together the corn syrup and shortening. Stir 1/4 of the dry ingredients into the creamed mixture. Beat the egg yolks, and stir into the mixture. Add the remaining dry mixture, alternating with the milk. Stir in the melted chocolate. Stiffly beat the egg whites and fold in. Pour the mixture evenly into the cake pans and bake for 30 to 35 minutes. Let cool before removing from the pan. Stack, slice, and serve.

<https://blog.newspapers.com/recipes-and-rationing>

BUDGET CHILIBURGERS

Ingredients

1 cup bread crumbs	2 tablespoons chopped onion
1–2 cups milk	2 tablespoons chili sauce
2 pounds ground beef	1 teaspoon salt
2 eggs	1–2 teaspoons pepper



Directions

Pour the bread crumbs into a bowl and pour the milk, a bit at a time, on top to soften. Make sure the milk doesn't make the bread crumbs soggy. Add the ground beef, eggs, onion, and chili sauce, and mix to combine. Form into 6 to 8 3/4-inch-thick patties. Season with the salt and pepper. Broil to taste.

<https://blog.newspapers.com/recipes-and-rationing>

The PHYSICISTS' DAUGHTER

HISTORICAL BACKGROUND:

HISTORICAL BACKGROUND: THE HOME FRONT

Novelists and filmmakers began telling stories about World War II before the war was over and before anybody even knew how it would end. These movies and films have often focused on the experiences of the people on the battlefield, as most war stories do. The experiences of the people left behind are less often told, and some of them are in danger of being lost to time. While writing *The Physicists' Daughter*, I listened to oral histories and read the stories of people on the American home front, many of them women, who did far more than wait by the mailbox for word of their faraway, endangered loved ones.

These women built airplanes, cracked military codes, separated uranium for the first atomic bombs, managed households single-handedly while necessities were rationed, and much more, and they did it at a time when many could not even own a bank account. They did it in a world shadowed by a war that touched everyday lives in the United States in ways that aren't always depicted in novels and films about World War II. People on North Carolina beaches watched and listened as submarines sunk American ships. German spies came ashore in Florida and New York. A Japanese submarine bombarded coastal targets near Santa Barbara. Blackouts and air raid drills across the nation drove home the notion that the oceans weren't a fail-safe protection against attack.

Through it all, women held down the home front. The familiar image of Rosie the Riveter reminds us that they built the war machines that won the war, but what was Rosie's life like? The legend of Rosie the Riveter begins and ends with the image of her flexing the muscles she used to get her job done. In *The Physicists' Daughter*, I have tried to give readers more of Rosie in the form of the protagonist, Justine Byrne. Justine, the orphaned daughter of two physicists, brings a specialized expertise to her work that nobody expects a woman to have, and this is very bad news for the Nazis.

The PHYSICISTS' DAUGHTER

HISTORICAL BACKGROUND:

PUTTING JUSTINE INTO CONTEXT: FROM WOMEN IN WAR WORK TO LADIES IN THE LAB

Even before World War II, women were pioneering the twentieth-century science that changed the world. Marie Curie is justifiably famous for her pioneering research in radioactivity, but the contributions of other women are too little-known. Curie's daughter Irène Joliot-Curie was a co-discoverer of artificial radioactivity. Lise Meitner was a co-discoverer of nuclear fission. Their work paved the way for the nuclear bombs that ended the war.

Justine Byrne is the descendant of this generation of female scientists. Her parents, like Marie and Pierre Curie and Irène and Frédéric Joliot-Curie, were scientists, colleagues, and life partners, and Justine has been raised to see her future in the laboratory with them. Her parents taught her physics from the time she could talk. They taught her to weld and to blow glass so that she could craft her own laboratory equipment. They made sure she could speak German so that she could communicate with important thinkers in the field and read their work. But her dreams of college and then a lifetime in science are dashed when they die in a car accident before she even finishes high school.

Resilient and determined, Justine takes work in a munitions factory, where the war means she can hold a job normally reserved for men and collect a man's paycheck. What her employer—and her unseen adversary—don't realize is that her knowledge of physics means there are secrets they can't keep from Justine. She knows she is not building what her boss says she's building, and she can tell someone is trying to sabotage her work.

It doesn't pay to underestimate a woman like Justine. The Nazis are no match for the physicists' daughter.

DISCUSSION QUESTIONS

1. It becomes clear that Paul doesn't intend to leave Justine's life despite being a spy. Do you think they'll be able to navigate a relationship fraught with secrets they can't ever tell each other?
2. In the 1940s, intelligence wasn't always considered an attractive trait in a woman. Men could find intelligence off-putting, and women's social groups might reject a girl seen as smart. Did that part of Justine's story feel realistic to you? Do you think this situation has changed?
3. Were you able to solve Paul's message to Justine?
4. Women were not allowed to open a bank account on their own until the 1960s. Have you ever thought about what it meant to be unable to open a bank account?
5. Do you know or remember women who would have been adults during WWII? Did those women ever talk about their experiences? How do you think it affected them to be competently running a welding machine and/or a household and/or a family budget only to be told to step back and hand over those responsibilities when the men came home?
6. Did *The Physicist's Daughter* leave you interested in learning more about real-life twentieth-century science?